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INTENSIVE SURVEY AT 11-JD-126 JO DAVIESS COUNTY

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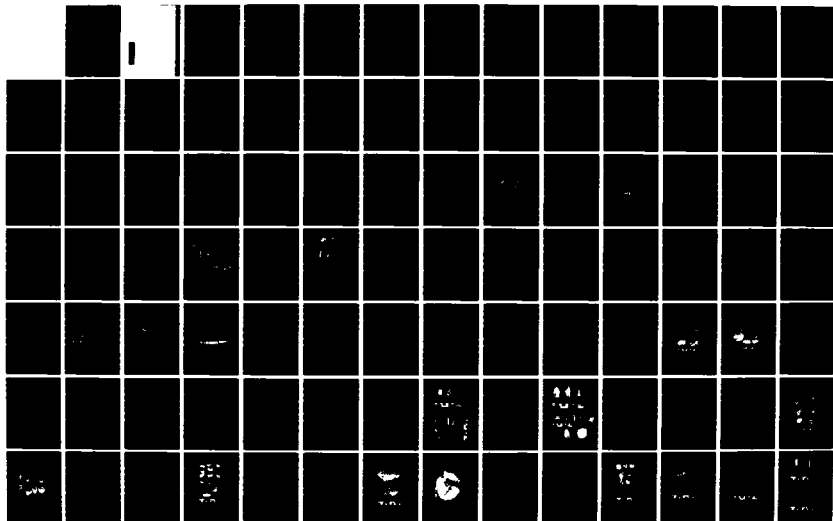
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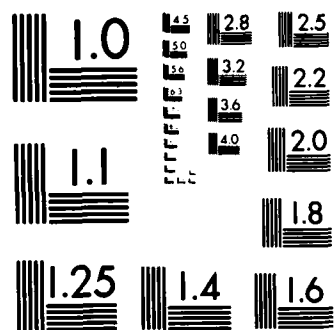
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Five archaeological components were identified: (1) a Trempealeau/McGregor Phase component; (2) an Allamakee/Millville Phase component; (3) a Maples Mills component; (4) a Keyes Phase (Effigy Mound) component; and (5) a late 18th century Euro-American component. Sub-surface features at the site, which is buried under recent alluvium include storage pits, sheet midden, and a late 18th century domestic structure. Construction activities at 11 Jd 126 had destroyed a shell midden, and others may occur at the site.

Approximately 90% of 11 Jd 126 remains undisturbed. The recovery of carbonized floral remains, faunal remains, and diagnostic cultural materials from buried, stratified contexts, indicates that the site has high potential for research relating to Middle Woodland, Late Woodland, and 18th century occupation of the lowland flood plain in the Quad-state region.

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A B S T R A C T

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TABLE OF CONTENTS

Abstract.	i
List of Figures	iv
List of Tables and Appendices.	vii
Introduction.	1
Environmental Contexts.	2
Previous Investigations	12
Study Objectives.	15
Management Objectives.	16
Site Geomorphology	16
Regional Research Objectives.	16
Recovery Plan Objectives	17
Methods and Techniques of Intensive Survey.	18
Results of Investigations	20
Barge-cut Excavations.	20
Levee Crest Excavation	31
Levee Backslope Excavation	37
Excavations at the Flat.	38
Controlled Surface Collection.	58
Soils Geomorphology.	58
Research Results - Occupational History of 11 Jd 126. . .	64
Early Woodland Components.	65

Table of Contents (continued)

McGregor/Trempealeau Phases.	67
Allamakee/Millville Phases	74
Late Woodland Occupation	77
Historic Period Occupations.	81
Gunflints	82
Glass	82
Kaolin Pipestems.	82
Tinklers.	82
Beads	82
Shot.	88
Iron.	88
Summary and Conclusions of Investigations	91
Limitations on Data Recovery	91
Site Impacts	92
Future Research Potentials	92
Prairie Phase	92
Trempealeau/McGregor Phase.	93
Allamakee/Millville Phase	93
Late Woodland, Keyes Phase, Maples Mills.	94
Eighteenth Century Euro-American Component.	94
Conclusions.	95
References Cited.	105

LIST OF FIGURES

Figure	Page
1. Location of 11 Jd 126, Jo Daviess County, Illinois.4
2. Site Map, 11 Jd 1265
3. Current Hydrological Setting of 11 Jd 1266
4. Hydrological Setting of 11 Jd 126, 1839-1840.7
5. Hydrological Setting of 11 Jd 126, 18938
6. Hypothesized Thalweg sequence, Navigation Pool 12	10
7. Feature 6, plan view, level 1	22
8. Feature 6, plan view, level 2	23
9. Feature 6, plan view, level 3	24
10. Feature 6, plan view, level 4	25
11. Feature 6, profile.	26
12. Feature 6, profile.	27
13. Feature 7, plan view, level 4	28
14. Feature 7, profile.	29
15. Feature 7, profile.	30
16. Feature 8, profile.	32
17. Feature 8, profile.	33
18. Erosion of 11 Jd 126 at the west wall of the barge cut	34
19. Test Pit 0-0, profile, north wall	35
20. Test Pit 0-0, profile, east wall.	36

21.	Profile, north wall, 10N-0W	39
22.	Profile, east wall, 10N-0W.	40
23.	Plan view, level 11, 10N-0W	41
24.	Cut-bank profile, cleared of vegetation	43
25.	Profile A-A'.	44
26.	Profile A-A', cairn 1	46
27.	Profile A-A', cairn 2	47
28.	Profile A-A', cairn 3	48
29.	Plan view, daub concentration	49
30.	Plan indicating floor remnants of structure . .	50
31.	Plan below flooring of structure.	52
32.	Balk Profiles	53
33.	Construction techniques	54
34.	Daub samples, 11 Jd 126	56
35.	Daub samples, 11 Jd 126	57
36.	Soil Profile 1.	59
37.	Soil Profile 2.	59
38.	Soil Profile 3.	60
39.	Soil Profile 4.	60
40.	Soil Profile 5.	61
41.	Soil Profile 6.	61
42.	Soil Profile 7.	62
43.	Soil Profile 8.	62
44.	East West configurations of Main Channel Deposit.	63
45.	Bifacial implements, 11 Jd 126, A-corner notched (?) implement, B-contracting stemmed implement, C-drill.	66

46.	Broken bifaces from 11 Jd 126.	66
47.	Projectile points, 11 Jd 126, A-B, Stueben, C, Late Woodland Triangular.	68
48.	Lithic detritus, 11 Jd 126, A-B, D-G, core reduction flakes, D, H, primary decortation flakes from chert cobbles.	68
49.	Middle Woodland ceramics, 11 Jd 126.	72
50.	Middle Woodland ceramics, 11 Jd 126.	73
51.	Cord-Imprinted ceramics, 11 Jd 126	76
52.	Madison Cord-Imprinted vessel fragment, 11 Jd 126, A. reverse, B. obverse.	79
53.	Starved Rock Collared Vessel, 11 Jd 126.	80
54.	Gunflints, 11 Jd 126	83
55.	Fire shattered gunflints	84
56.	Case (Gin) Bottle sherds, 11 Jd 126.	85
57.	Kaolin Pipestems, 11 Jd 126.	86
58.	Tinklers, 11 Jd 126.	86
59.	Bead Assemblage, 11 Jd 126	87
60.	Musket ball and shot, 11 Jd 126.	89
61.	Iron items, 11 Jd 126, A, unidentified, B, Awl (?) with daub encrustations, C, Nail, D, knifeblade.	90

LIST OF TABLES

Table	Page
1. Lithic Inventory Summary, 11 Jd 126	98
2. Ceramic Inventory Summary, 11 Jd 126.100
3. Gunflint Attributes, 11 Jd 126.102
4. Trade Bead Inventory, 11 Jd 126103

LIST OF APPENDICES

Appendix	Page
A. Scope of Work.	111
B. Analysis of Faunal Remains	118
C. Analysis of Floral Remains	127
D. Radiocarbon Assay.	138
E. Sieve and Pipette Analysis of Soils.	140
F. Location of Artifact Storage	158
G. Crew Lists	159
H. Site Form, 11 Jd 126	162
I. Recovery Plan 11 Jd 126.	165
J. Review Correspondence.	180

INTRODUCTION:

During the course of archaeological survey work in Navigation Pool 12 of the Upper Mississippi River a multicomponent site was discovered on the lowland floodplain (Boszhardt and Overstreet 1982). Surface collections at the exposed erosional face of a side-channel levee indicated that the site harbored components from Woodland eras and from historic times. In September, 1981, a portion of this site, now identified as 11 Jd 126, was disturbed by construction activities associated with the development of a barge terminal. Following consultations which included Rock Island District, U.S. Army Corps of Engineers personnel, representatives of the Illinois State Historic Preservation Officer, the DuBuque Sand and Gravel Company, and Great Lakes Archaeological Research Center, Inc., a determination of eligibility was sought for 11 Jd 126. To this end, investigations were conducted during November 1981 (Boszhardt and Overstreet 1982).

In spite of severe weather conditions during November of 1981, sufficient data were collected from the barge terminal easement to determine that 11 Jd 126 was eligible for The National Register of Historic Places. A No Adverse Effect determination was derived by preserving 90 percent of the site and developing a recovery plan for the 10% to be destroyed. The recovery plan was formulated and a contract for data recovery was awarded to Berg-Zimmer and Associates with investigation scheduled to commence in 1983. In the interim, shoreline protection was established to prevent further disturbance or destruction of archaeological deposits at the barge terminal easement.

Following the test excavations and evaluation of the portion of 11 Jd 126 to be impacted by barge terminal construction, it was determined that additional intensive survey and testing were necessary at 11 Jd 126 outside of the barge terminal easement to determine further recovery interest and for achieving management objectives including protection and preservation. As well, the data recovered from the limited testing at the barge terminal easement were integrated with these most recent efforts to provide a more comprehensive understanding of the activities carried out at 11 Jd 126 by prehistoric and historic populations.

In the most general sense, these investigations were carried out to determine further recovery interest and for achieving management goals of protection and preservation. More specific objectives included: (1) refinement of the boundaries of 11 Jd 126 outside the channel easement with emphases placed on both horizontal and vertical distribution; (2) more explicit understanding of the

cultural components represented in the portion of the site outside of the channel easement; (3) the stratigraphic position of cultural components in relation to the geomorphological setting; (4) in so far as possible from survey and test excavations, the types of activities carried out by the sites historic and prehistoric inhabitants; (5) the relationships between the site, the environment, and the surrounding resources; (6) an assessment of previous disturbance at 11 Jd 126 including vertical and horizontal distribution of such disturbances; and (7) consideration of the research problems identified in the recovery plan for the segment of 11 Jd 126 to be impacted by barge terminal construction. An additional goal was the evaluation of existing woodland era subsistence-settlement models in light of the new data from survey and testing operations on the Pool 12 lowland floodplain.

Intensive survey and test excavations were conducted during the months of September and October, 1982. Materials were returned to the lab for processing and analyses of assemblages and soil samples were conducted during November 1982 through February 1983.

ENVIRONMENTAL CONTEXTS:

Site 11 Jd 126 is situated on the lowland floodplain of the Mississippi River at the northern margins of Navigation Pool 12. When compared with other reaches of the Mississippi River, the floodplain in Navigation Pool 12 is relatively constrained with its maximum width of approximately 3 miles at Dubuque, Iowa with an average width of some 2 miles throughout most of the Pool. Major topographic features of the floodplain include islands, low extensions of the mainland shores, backwater marshes, ponds, lakes, sloughs, levees, channel scars, side channels, and the now stabilized main channel of the river. All of these lowland floodplain topographic features occur in close proximity to 11 Jd 126.

These landforms are of post-glacial origin and result almost exclusively from re-worked sands and silts that cap Pleistocene deposits of sand and gravel outwash that partially fill the Mississippi trench. The depth of Holocene sediments is poorly documented, although previous investigations (Boszhardt and Overstreet 1982) serve to indicate that there is great variation in the sediment mantle overlying the Pleistocene deposits.

Relief of the lowland floodplain is slight, ranging from 0-3 meters above the artificial fluctuations in water levels in the Pool. The most prominent and regular features one observes are the levee crests arranged in linear configurations along present and past channels. An undulating landscape derives from the levee crests and backslopes, channel scars, and sediment-filled backwater lakes and ponds.

Site location is indicated in Figures 1 and 2, Eleven Jd 126 is situated on the levee crest and backslope adjacent to Frentress Lake slough. The levee backslope is relatively gentle, but is broken by old channel scars for a distance of approximately one-half mile in a northerly direction where it abuts a Pleistocene terrace. The levee crest has a maximum elevation of 600 feet above sea level and the low terrace, although considerably modified, has an average elevation of 615 feet. Historical documents and analyses of sediments indicated a complex and dynamic landscape evolution at 11 Jd 126. Review of pre-lock and dam maps provide ample evidence that the hydrological setting of the site has been subjected to significant alterations during historic times. The current setting is indicated in Figure 3, but it should be noted that the outlet of the Menominee River is the product of dredging related to 20th century agricultural activities.

Figure 4 is adapted from the General Land Office Survey plat map compiled in 1839-1840 and depicts a much different situation, the outlet of the Menominee River occurring substantially to the southeast of 11 Jd 126. The more detailed Mississippi River Commission Charts of 1893 portray not only a distinctly different course of the Menominee River, but also an old channel scar immediately north of the site. A review of Figure 2 will indicate that at least two old channel scars are located north of 11 Jd 126 between the current side channel of the Mississippi River and the edge of the Pleistocene terrace.

The geomorphology at 11 Jd 126 is not precisely known, however, two alternatives can be suggested. One of these is related to Crooked Slough, now a rather insignificant back-water body (see Figures 3 and 5). It is possible that Crooked Slough may have been an earlier course of the Menominee River. Channel scars that now intersect the present course of Crooked Slough have been blocked by levee formations adjacent to the present course of the slough. As well, it is possible that Crooked Slough, in one or several of its earlier courses, may have been an important side channel through the bottomlands in this region.

Another major alternative has been suggested by Dr. Richard C. Anderson, Augustana College, Department of Geology, Rock Island, Illinois. Dr. Anderson has developed an hypothesis for shifting channel locations in the upper reaches of Pool 12. The model of channel development and migrations notes a shift from the Illinois side of the river to the present location along the base of the Iowa bluffs. Four main channel (thalweg) locations are identified in Figure 6. The second thalweg in Dr. Anderson's sequence delineates a course which follows the Frentress Lake Slough immediately adjacent to 11 Jd 126. This construct provided

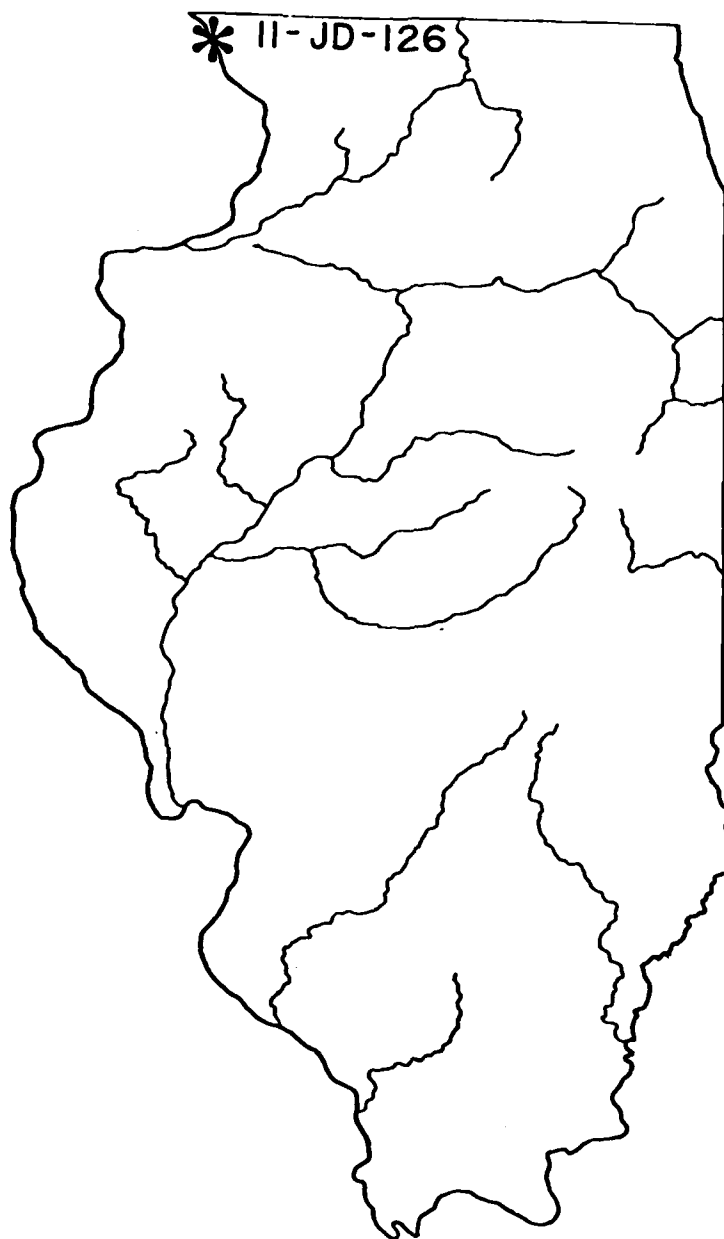


Figure 1: Location of 11 Jd 126, Jo Daviess County, Illinois.

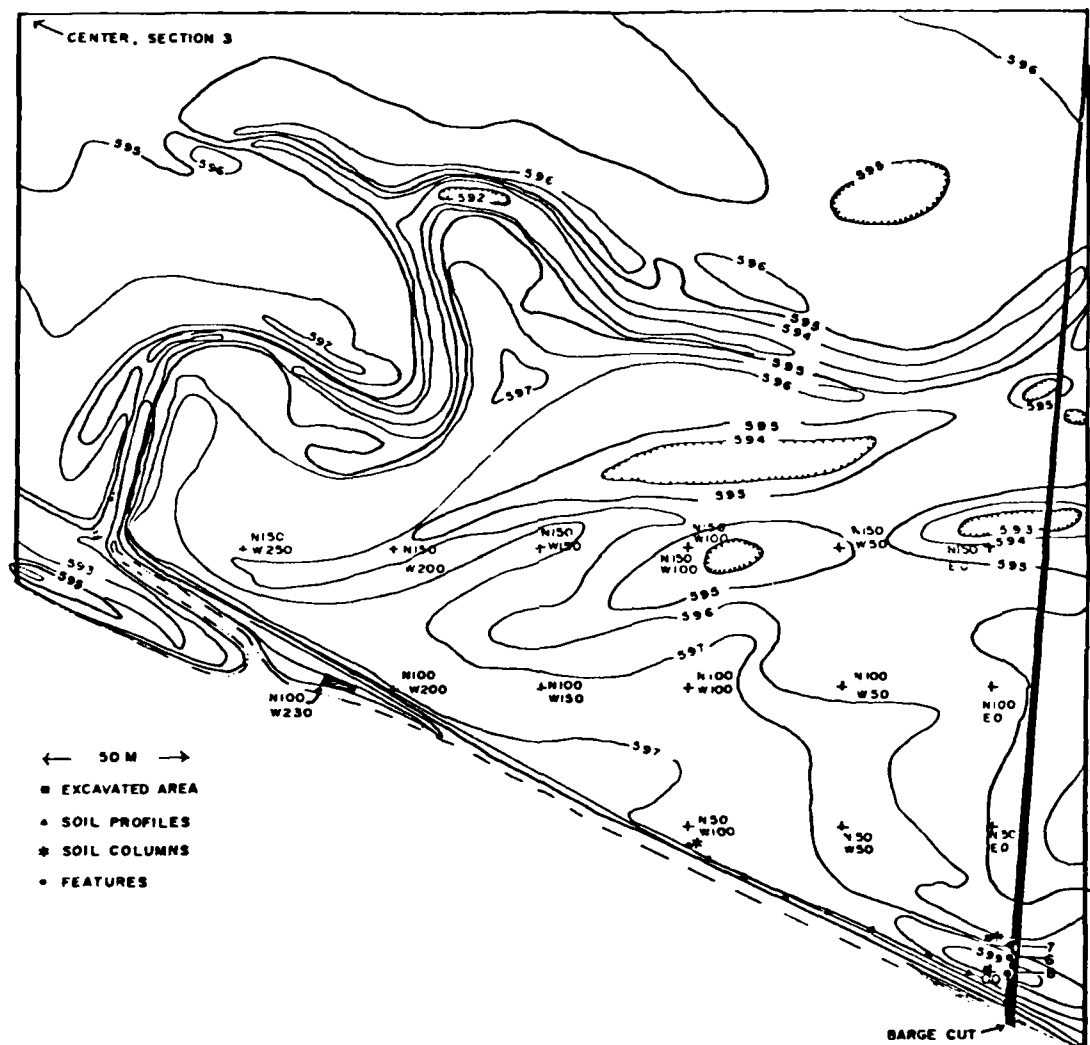


Figure 2: Site Map, 11 Jd 126. (Adapted from U.S. Army Corps of Engineers Land Acquisition maps, 1940, copies on file at Rock Island District).

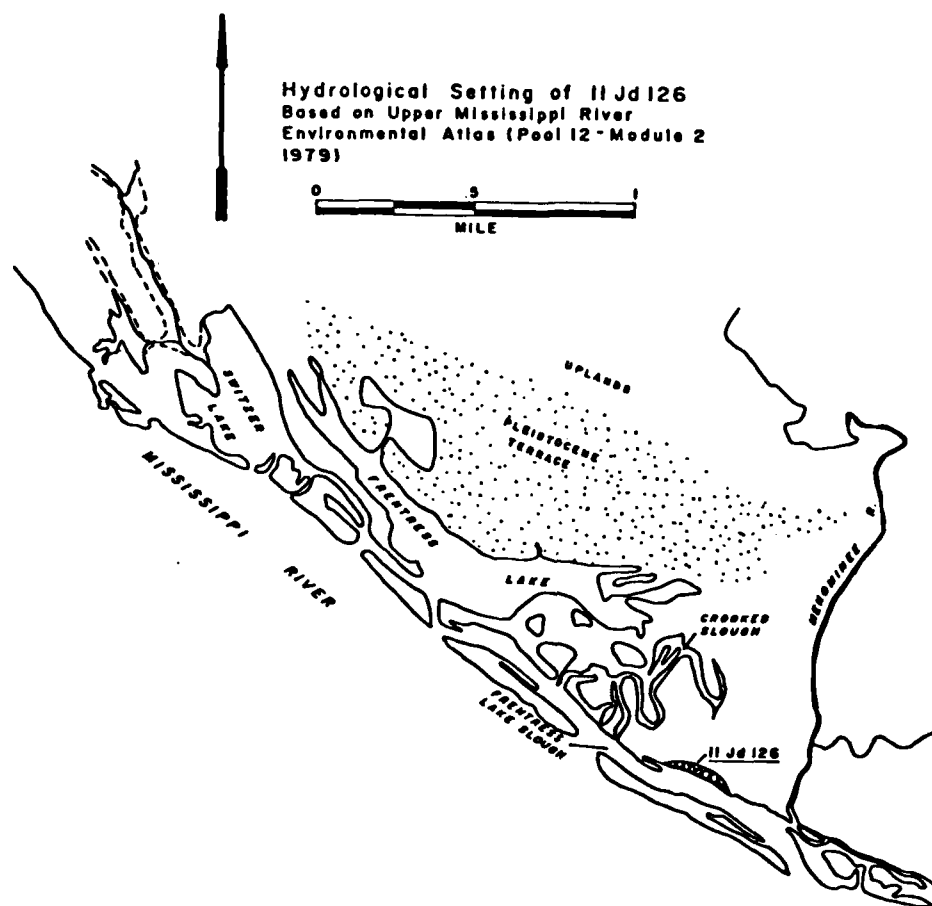


Figure 3: Current hydrological setting of 11 Jd 126.

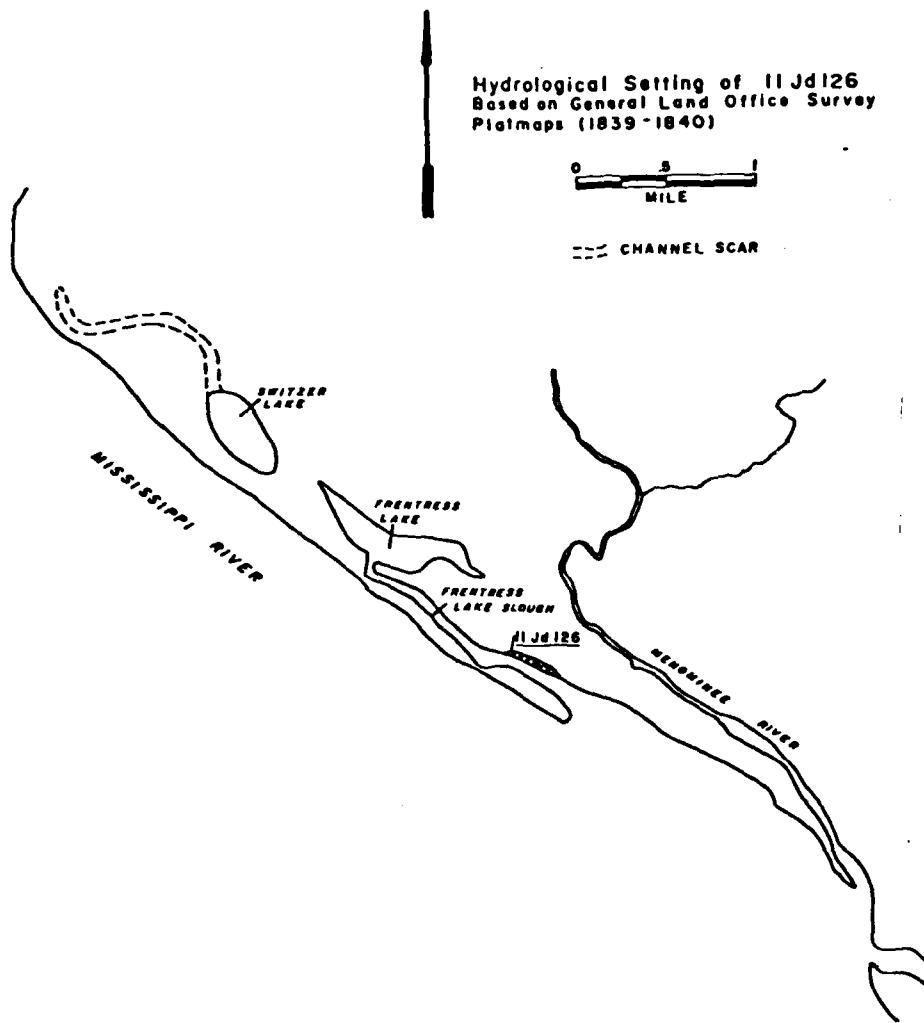


Figure 4: Hydrological setting of 11 Jd 126, 1839-1840.

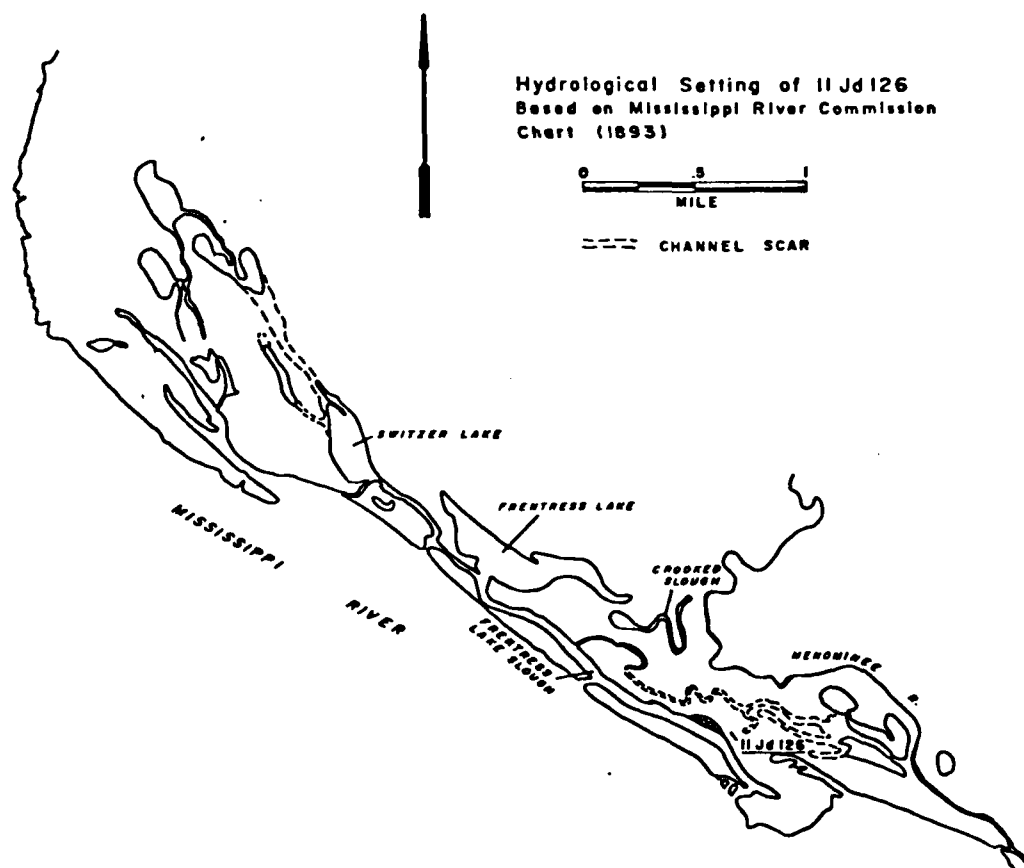


Figure 5: Hydrological Setting of 11 Jd 126, 1893.

an interesting opportunity for correlation of past habitats with Middle and Late Woodland occupations at 11 Jd 126. In addition, recovery of diagnostic materials from Woodland contexts at the site provided opportunities for Holocene landform chronology in the immediate site environs.

Earlier investigations (Boszhardt and Overstreet 1982) had determined that the silt/sand sediment mantle at 11 Jd 126 was superimposed on a linear landform of coarse sand. Dr. Anderson's soils analyses and field observations led to the conclusion that the formation under the more recent sediment mantle was deposited in a main channel environment. During recovery operations at the barge terminal easement, features (storage pits and a probable hearth) were noted intruding into the sandy formation. Thus, one of the emphases of the intensive survey and testing was to determine the relationship of archaeological deposits to this main-channel landform and to more precisely delineate the coarse sandy deposit.

All of these factors are of course important to reconstructing the immediate habitat of the site during the historic and prehistoric eras of occupation. If, for example, in the earlier periods of prehistoric occupation the site was a main channel setting, particular types of resources would not have been immediately available. On the other hand, if components at the site could be correlated with side channel or backwater situations, the assemblages from the site might well demonstrate that topographic-hydrological situation. Finally, if the dynamic environment of the lowland floodplain had resulted in major shifts in the site environment, data from survey and excavation could reliably be applied to understanding temporal shifts in resource procurement or other activities as well as refining the chronology of landscape evolution in the immediate site environs.

The current vegetation cover on the lowland floodplain generally, and certainly at 11 Jd 126, is influenced by post-lock and dam water levels. Fluctuations in water level have major effects on the understory on the lowland floodplain and dominant species such as poison ivy, nettles wild grape, elderberry, and sedge grasses underscore the instability of the contemporary environment. In slow water flow areas such as sloughs, backwater lakes, and ponds, areas where siltation is most dramatic, marsh vegetation predominates. Arboreal species are characterised by wet forest types with highest frequencies including Silver Maple, Cottonwoods, River Birch and Elms. Prominent elevations and better drained loci, levee crests for example, include minor stands of oak and hickory. In general, the composition of contemporary species derives

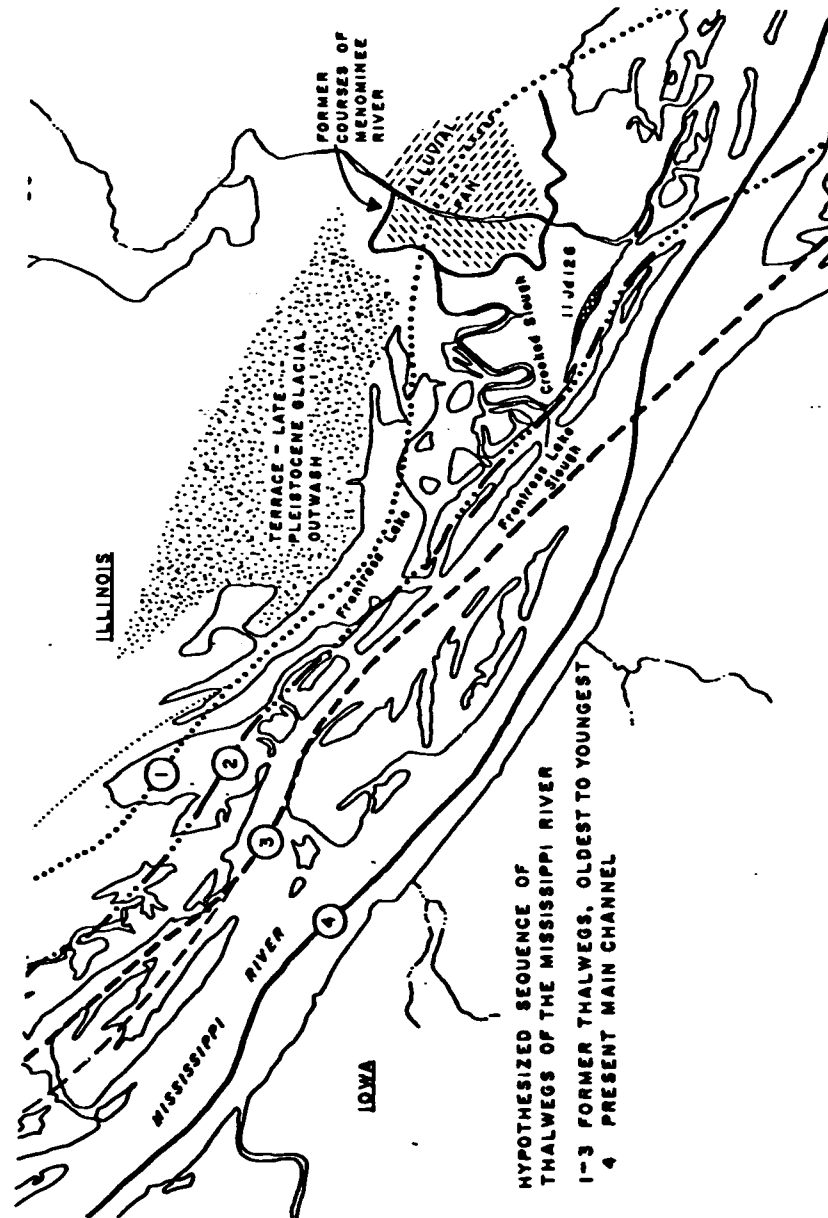


Figure 6: Hypothesized Thalweg sequence, Navigation Pool 12.

from frequent high water, marks of which are quite obvious as high as four feet above the floodplain, and from extensive historic period lumbering activities (see Boszhardt and Overstreet 1982: 17).

Presettlement vegetation records, particularly the Government Land Office records, indicate that historic activities have narrowed the range of arboreal species in the environs of 11 Jd 126. Survey lines were extended to the east bank of the Mississippi River and consequently, the recorders crossed sloughs, side channels, levee crests and backslopes providing a good sample of the lowland vegetation. Bennett records the following species for the year 1839: Maple, Birch, Ash, Cottonwood, Hackberry, Linn (Linden or Basswood), and oaks with an understory composed of weeds and vines (1839: 409).

The 1892-93 Mississippi river Commission charts also provide distributions of arboreal species on the lowland floodplain. These maps, like those of the original land survey records, note a greater diversity of tree species than those now present. To an unknown degree, maintenance of artificially high water levels has fostered the replacement of oaks and hickories by moisture tolerant species such as willows, silver maples, and cottonwoods. However, historic land-use patterns, not related to navigation improvements, also played a major role in modification of the pre-settlement vegetation.

As early as the first two decades of the 19th century, the well documented regional lead mining activities certainly effected the composition of the lowland floodplain forest. In 1826, for example, the United States government, already exercising strong controls on the industry, restricted and directed land clearing activities. Residents of the Galena region were required to secure wood for personal use, fuel, fencing, building, "from islands in the Mississippi, and from no other place in the vicinity, as timber elsewhere is reserved for the purpose of smelters and lessees (History of Jo Daviess County 1878: 266)." About this same time, land clearing accelerated for both agricultural and lead mining pursuits. The immediate result of upland clearing was increased erosion and sedimentation.

Farming activities on the lowland floodplain immediately adjacent to 11 Jd 126 were carried out well into the 20th century. Pre-lock and dam maps of the site environs denote a complex of farm buildings situated to the southeast of the barge terminal easement. Fence-lines, access roads, and cultivated fields are situated immediately north of 11 Jd 126. However, the site itself has never been subjected to cultivation. Local informants indicated that this most recent agricultural endeavor is responsible for

the present course of the Menominee River at the confluence with the Mississippi River, the river mouth having been dredged to accommodate farming.

Recent landuse at 11 Jd 126 can be inferred from structural remains at the site. Sections of recent rip-rap and foundation blocks provide evidence of late 20th century habitation at 11 Jd 126. As well, the burned surficial remains of several structures were apparent during the intensive survey. These structures relate to the development of recreational homes or cottages. All of the structures appear to have been built above ground based on the lack of cellar depressions at the site. According to personnel of the Dubuque Sand and Gravel Company, these buildings were used by hunters and fishermen on a seasonal basis and the last of the buildings was removed by demolition during the 1960's.

Very recent transitory and ad hoc usage can be identified from campfire locations, trash-heaps, e.g., beer cans, fish remains, and other surface debris. The most recent "architectural" feature is represented by a two-hole privy with a two-by-four frame covered with black visquine modesty screen. These features are ostensibly related to contemporary recreational functions such as hunting, boating, and fishing all of which were witnessed during our investigations at 11 Jd 126.

PREVIOUS INVESTIGATIONS:

As one might expect, the earliest regional investigations focused on mound surveys and excavations. In 1835, and again in 1870, mounds in the Portage Group at the mouth of the Galena River were excavated by local residents (History of Jo Daviess County 1878: 277, 844). During the late 19th century, agents of Cyrus Thomas conducted extensive work in the region providing many plats of mounds and mound groups (1884, 1891). The Thomas surveys did not, however, include locales near 11 Jd 126 or anywhere immediately along the margins of Navigation Pool 12.

As a private citizen, William B. Nickerson investigated both mounds and habitation sites along the Illinois bluffline in Jo Daviess County. Very little of Nickerson's work was published (see Nickerson 1908a, 1908b, 1911, 1912), although his detailed notes and records have since been cited by many investigators. Regarding the quality of Nickerson's work Fay Cooper-Cole noted:

Mr. Nickerson was an employee of the Chicago and Great Northwestern Railway and was so located that

he could devote considerable time to excavation. A reading of his field notes quickly convinces one of the extreme care with which he conducted his exploration. It is also evident that he anticipated modern methods of excavation by many years. In an article written for Volume X of Records of the Past, he pleads for conservation of antiquities, condemns the pitting of sites and finally says:

"The structure must be laid open and examined by vertical sections over the entire area covered by the mound, and if it is desired to retain it as a prehistoric monument it may be rebuilt. Anything short of this gives but partial results which cannot become a basis for accurate deductions."

He staked his sites into squares, located finds both horizontally and vertically, kept accurate records and made detailed drawings of profiles and structures (1945: iv-v).

Heavy reliance was placed upon the manuscripts, notes, and records of Nickerson by Bennett in his now classic work detailing the Archaeology of Jo Daviess County (1945). Along the reach of the Mississippi River now contained in Navigation Pool 12, Bennett reported the excavation of several bluff-top mound groups and habitation sites both at higher elevations and at the margins of the lowland floodplain and bluff-bases (1945). These investigations, under the auspices of The University of Chicago, were conducted in a region that has its northernmost extension just north of the mouth of the Galena River, persisting to the south, to the vicinity of the small town of Aiken. Bennett's investigations included re-excavation of mounds in the Portage Group, and additional Middle and Late Woodland tumulii, the latter of which included both linear and effigy mounds. Habitation sites yielded evidence of both Middle and Late Woodland occupations, however, the predominant components are assignable to the Late Woodland Period (Bennett 1945). Notably, the low-lying habitation sites were capped with recent alluvium to depths of several feet.

To the south of Navigation Pool 12, Bennett also defined the mixed Mississippian-Woodland complex which he classified as the Apple River Focus based on excavation in that locality. With the exception of stone box graves on the Portage Ridge (Bennett 1945: 127-131) no Apple River Focus components have as yet been identified from the Pool 12 environs.

During his involvement in Iowa archaeology Ellison Orr also conducted investigations on the Iowa side of Pool 12.

In the 1930's Orr produced several manuscripts describing mound groups 13 Jk 9, Jk 10, and Jk 11 situated on bluff-tops adjacent to the pool (n.d.a., n.d.b., and n.d.c.). Orr's work is supplemented by Keye's investigations at 13 Jk 6 and at a Woodland village (13 Jk 6) situated on a Pleistocene terrace north of Bellvue, Iowa.

During the 1950's, Wilfred Logan initiated his long-term regional research that stands as the most comprehensive compilation of Woodland archaeology in the region (1976). Based on data collected from rock shelters, open habitations, and mounds, Logan established regional typologies and a cultural historic framework for the northeast Iowa locality and contiguous areas in adjacent states. Navigation Pool 12 was not intensively investigated by Logan, however, and his data base includes only a single site from the pool, 13 Jk 11. Utilizing information derived from Orr's excavations, Logan identified this mound group as a site with both Hopewellian and Late Middle Woodland (Weaver) components (1976: 12, 122, 147, and 158).

Survey work intensified in the 1970's, largely the result of increased funding from Historic Sites survey programs. In Illinois, for example, the University of Wisconsin-Milwaukee initiated inventory work in the northwestern part of the state along the margins of the Rock and Mississippi Rivers. Several general and preliminary reports resulted from this work including Fowler and Gregg (1972), Fowler and Dudzik (1974, 1975), Dudzik (1974a) lack site-specific information, but do provide information regarding site densities. Additional investigations conducted by the University of Wisconsin-Milwaukee include reports of both surveys and excavations of sites along the Mississippi River from the mouth of the Rock River at Rock Island, Illinois to Jo Daviess County (see for example, Dudzik 1974b, Fowler and Dudzik n.d., Gregg 1975, Benchley and Dudzik 1976, Benchley, Gregg and Dudzik 1978, and Benchley, Hassen and Billeck 1979). The Benchley Gregg, and Dudzik (1977) report complements an earlier study by Herold (1971), which in turn incorporates the pioneer work of Nickerson at Albany Mounds.

During this same period, survey work was conducted by staff of the State Archaeologist of Iowa. Most significant to interpretations at 11 Jd 126 is the survey work at the confluence of Catfish Creek and the Mississippi River. Large collections from this locality just across the river from 11 Jd 126 include historic and prehistoric materials and are currently undergoing analyses, but were graciously made available for study at the Office of the State Archaeologist of Iowa facilities.

Two recent regional syntheses provided substantial insights to aid interpretations of our investigation at 11 Jd 126. The recent works of Benn (1979, 1980) and Stoltman (1979) both revise and embellish the frameworks established by Logan (1976) and Struever (1964). Variations in these newly developed models of Woodland prehistory are assignable, in part, to regional emphases, Benn's from the focus on sites in the northeast Iowa locality and Stoltman's from the focus on the southwestern Wisconsin locality.

More restrictive perspectives regarding the regional prehistory are provided by Riggle (1981) and Theler (n.d.). Riggle has recently reviewed information relating to the chronology of Maples Mills Late Woodland manifestations and has presented the rather provocative suggestion that this complex may have developed locally in western Illinois beginning as early as A.D. 700. Theler's investigations at the Mill Pond Site (47 Cr 186) have resulted in a convincing reconstruction of Prairie Phase (Stoltman, Theler and Boszhardt 1981) settlement and subsistence activities on the lowland floodplain of the Mississippi River. Finally, for more comprehensive discussions of the regional literature, readers are referred to Boszhardt and Overstreet 1982).

Few avocational archaeologists apparently collect archaeological sites in the lowland floodplain in Navigation Pool 12. This collector bias is largely a function of logistical problems of boat travel and heavy vegetation which prohibits high artifact yields. One notable exception is Mr. Ray Miller who spends a great deal of time on the river in his capacity with the Illinois Department of Conservation. Other informants included Mr. D.J. McCullough, Dubuque Sand and Gravel Company, Mr. Larry Abbott and Dr. Joseph Tiffany, Office of the Iowa State Archaeologist, Mr. Harris Palmer, Platteville, Wisconsin, and staff of the Galena Historical Society.

STUDY OBJECTIVES:

Initial investigations at 11 Jd 126 resulted in the determination that the site was extensive, harbored multiple components, and was eligible for the National Register of Historic Places. The scope of work for intensive survey, appended to this report, thus identified both management and research objectives. While it is often difficult to discriminate between research and management objectives specifically, some aspects of the investigation were conducted primarily to assist in more effective management of 11 Jd 126. Other aspects of the intensive survey were directed to providing a more substantive appraisal of the archaeological deposits for future archaeological research.

Management Objectives:

Immediate management objectives included a refined delineation of the areal extent of 11 Jd 126. As well, efforts were directed to determining the nature and extent of previous disturbance to the archaeological deposits outside of the proposed barge terminal easement. Additional management concerns were the definition of the depth of archaeological deposits at various localities, nature and extent of erosion, past, present, and future, quality of preservation of organic remains, and the potential for additional future research. Finally, more comprehensive data were sought to identify the specific components at 11 Jd 126 that would not be impacted by barge terminal developments.

Site Geomorphology Objectives:

During survey investigations and test excavation activities at the barge terminal easement (Boszhardt and Overstreet 1982) it was noted that the major subsurface geomorphological feature had been deposited in a main channel environment, that recent sediments to an unknown depth (earth moving activities at the barge terminal easement had removed surface soils) mantled archaeological deposits, storage/refuse features intruded into the sandy main channel feature, and that hydrological contexts had varied extensively. Several objectives of this investigation were designed to clarify site geomorphology.

First, we sought to define the limits of the main channel deposit and its relationship to historic and prehistoric occupations at 11 Jd 126. Second, the intensive survey was designed to investigate distinct topographic-geomorphological features to secure information relating to varying depths of the recent alluvial mantle that caps the archeological deposits. Third, we sought clarification of the sedimentary processes resulting in the current landscape configuration at 11 Jd 126. Fourth, investigations sought to clarify, in so far as possible, the relationship of past hydrological contexts and prehistoric and historic occupations at the site. The final objective was the correlation of diagnostic cultural materials and/or radiocarbon assay to aid the establishment of Holocene sediment chronology.

Regional Research Objectives:

Initial investigations at 11 Jd 126 had resulted in the definition of a possible Early Woodland (Prairie Phase) component, two Middle Woodland components, a Trempealeau/McGregor Phase occupation and a Milleville/Allamakee Phase occupation, at least one Late Woodland (Maples Mills) component, and an unidentified historic component. Diagnostic materials collected during the survey were recovered from mixed erosional contexts and

thus had little interpretive value aside from allowing for an identification of components represented at 11 Jd 126. Thus a major research objective was to recover controlled data from various components represented at the site so as to facilitate comparisons of site activities during different occupational periods.

Limited test excavations at the barge terminal easement provided evidence of sub-surface features and demonstrated the potential for floral remains. An additional objective of the intensive survey was to secure, if possible, plant and animal remains from various components at 11 Jd 126 to allow for a comparison of subsistence pursuits. If such data were forthcoming, it would be possible to investigate both differences and similarities in resource procurement by Middle and Late Woodland populations on the lowland floodplain at this locality in Navigation Pool 12.

In addition, if we were able to correlate specific components with particular hydrological and geomorphic contexts, and, specific resource procurement activities, the potential for testing regional models of settlement and subsistence would be significant. If, on the other hand, resource procurement and settlement phenomena remained fairly constant throughout the Woodland continuum, regional models (cf., Benn 1976, 1979, 1980; Mallam 1976; and Stoltman 1979) would have to be re-examined for their applicability for this locality of northwest Illinois.

Finally, while substantial time and effort have been devoted to investigation of terrace and upland mortuary and habitation sites in Jo Daviess County, there has been almost no investigation of the lowland floodplain habitat. To this end, our final objective was to integrate the results of investigations at 11 Jd 126 with those from upland stations to provide a more comprehensive understanding of regional subsistence and settlement behavior of woodland era inhabitants.

Recovery Plan Objectives:

An additional objective, related both to management and research, was an evaluation of the extant recovery plan based on the results of intensive survey. If, for example, additional components were identified, it would be appropriate to include such consideration in the recovery plan which is appended to this report. In a general sense, the intensive survey would provide an opportunity to evaluate excavation methods outlined in the recovery plan and provide additional data for those vested with the responsibility of recovery at the barge terminal easement.

METHODS AND TECHNIQUES OF INTENSIVE SURVEY:

Prior to deployment of the field crew we had developed a field strategy that included five primary tasks that were suited to meeting the objectives previously noted. The first of these was to establish a site grid upon which the horizontal and vertical distribution of archaeological materials would be recorded. Following establishment of the horizontal and vertical controls, we planned to conduct controlled surface collections at the erosional face of the side channel levee which would provide more detailed information on the distribution of archaeological components adjacent to Frentress Lake Slough. The third primary task was to clean profiles at approximate 10 meter intervals and map those profiles to determine the relationship of the sediment mantle to the underlying main channel sandy deposit, and, ostensibly the relationship of these major geomorphological features to the archaeological deposits. A fourth objective was the collection of soil columns at the locations specified by Dr. Anderson during his field inspection of the site and excavation units. Finally, we sought to conduct limited controlled test excavations at four locations at 11 Jd 126.

These strategies were generally followed during the field phase of the investigations. However, upon our arrival at 11 Jd 126 we determined that serious erosion was still destroying the site at the barge terminal easement. As a result, emergency recovery of features was incorporated in our intensive survey strategy.

Task 1, the establishment of horizontal and vertical controls at 11 Jd 126 was accomplished with a transit. Survey stakes were driven at 10 meter increments measured with a metric tape along north-south and east-west baselines. The grid was then superimposed on an extant U.S. Army Corps of Engineers base map with one-foot contour intervals. Because of the dense understory, composed primarily of nettles and poison ivy, survey lines were brushed with a weed whip and brush hook. Finally, each survey stake was marked with the appropriate grid increment.

To record the soil profiles along the erosional face of the levee, vegetation was removed and vertical profiles were cut with shovels and cleaned with trowels prior to mapping. These profiles were established at approximate 10 meter intervals along the longitudinal axis of the levee bordering Frentress Lake slough. In a few instances, because of rip-rap or slumped trees, the intervals are not exact. However, eight soil profiles were cut and mapped to establish the extent of the underlying main channel landform deposit and the relative depth of recent sediments. In addition, the depth of cultural materials was recorded

whenever they were recovered during the cleaning of profile walls.

Controlled surface collections were conducted along the entire length of the erosional levee face at 11 Jd 126. Control units consisted of 10 meter linear increments. The width, of course varied with the width of the exposed foreshore, ranging from approximately 2 to 3 meters. Collections were scheduled to take advantage of low water levels and materials were bagged and recorded by collection unit. Finally, surface collection was initiated at the barge terminal cut on the southeast margin of the site and extended to the confluence of Crooked Slough and Frentress Lake Slough on the northwest margin of 11 Jd 126 (see Figure 2).

Controlled excavations were conducted at four locations, the west erosional face of the barge cut, the levee crest west of the barge cut, the levee backslope west of the barge cut, and at a relatively flat portion of the site that does not manifest topography characteristic of the remainder of the site. While most of the site is marked by rolling topography, a function of levees, backslopes, and channel scars, review of Figure 2 will allow for an appraisal of a rather flat region that occurs approximately half-way between the barge cut and Crooked Slough. Figure 2 also provides locations of excavation units.

Excavation was conducted in arbitrary 10 centimeter levels unless cultural stratigraphy was apparent, in which case cultural strata were employed as sampling units. All matrix was passed through 1/4" mesh. Where the matrix consisted of sandy alluvium, soils passed easily through the screens. Silty soil, on the other hand, particularly when moist, would not pass through the screen. Thus, the matrix from units of silty alluvium were water screened in the adjacent side channel. This consisted of soaking the matrix and periodically agitating the screens to reduce the matrix.

Profiles and plan views were mapped for each excavation unit and photographic records were made of features, floors, and walls of excavations.

Following Dr. Anderson's visit to the field, soil columns were taken from the test excavation unit on the levee backslope (N10-W0) and from soil profile 8, at the northwest end of the underlying sandy substratum. Samples were controlled in 10 centimeter increments in each soil column and the column loci are depicted in Figure 2.

Soil samples were also collected from each level and feature to be returned to the laboratory for processing. Flotation of soil samples resulted in the recovery of carbonized organic remains and additional charcoal samples for radiocarbon assay.

Depositional differences on the levee crest and the levee backslope, as one would expect, were dramatic. Excavation of the test unit on the levee crest, where the mantle of recent sediment is relatively thin, and the underlying sand stratum quite well drained were much less difficult than on the backslope. At this location the silt mantle varies from 120 to 130 cm, is moist and compact, creating a very difficult matrix within which to work. In addition, owing to the homogeneous dark organic nature of the silt mantle, it is extremely difficult to identify stratigraphic elements, feature origins, or activity areas. Bioturbation has prohibited soil development in the silty alluvium, and one is forced to rely on the vertical and horizontal distribution of cultural materials to segregate components. This should be less of a problem in implementing the recovery plan as the area to be recovered is situated at a higher elevation where the underlying sandy structure is quite near the surface. The silt mantle is thinnest here, an unknown amount of overburden having been removed by earlier construction activities, and features intruding into the sands are easily discerned. Owing to these factors, the field strategy outlined in the recovery plan should be implemented with little difficulty.

The methods and techniques outlined above were determined to be the most fruitful approaches to meeting the objectives of the intensive survey as previously noted. By deploying test excavation units at the cited topographic contexts we assumed that the desired data regarding the depth of buried archaeological materials for various geomorphic situation could be obtained. The soil profiles served not only as an adjunct to determining depth of site burial, but also would provide more comprehensive data regarding the sub-surface distribution of the main-channel landform that underlies the site. The controlled surface collections would allow for a more detailed statement regarding the limits of 11 Jd 126. The retrieval of immediately endangered features at the barge cut was not planned, but served as immediate and necessary mitigation. Further, it provided an opportunity to enhance the sample on which the recovery plan was based. It should be noted that the Rock Island District Archaeologist was immediately notified, conducted an on-site inspection, and arranged for temporary bank stabilization at the barge cut pending the implementation of the recovery plan.

RESULTS OF INVESTIGATIONS:

Barge cut excavations:

Three basin shaped features were excavated at the barge cut. These were identified as features 6, 7, and 8,

features 1-5 having been reported during an earlier investigation at 11 Jd 126 (Boszhardt and Overstreet, 1982).

Feature 6 was noted as a basin shaped pit, exposed in the barge cut profile, and extending into the sandy alluvium to a depth of approximately 60 cm. Also exposed in profile was a lens of fresh water mussel shells. The origins of the feature at the surface were not discrete and the appearance in plan was a rather elongate amorphous discoloration (see Figure 7). Excavation of the feature commenced in 10 cm levels and the pit outline became sharply demarcated by level 4 (see Figures 8, 9, and 10). The shell lens was removed as a unit for separation and identification in the lab as the shell was quite fragile and this technique aids in more complete recovery and ease of identification.

The origins of Feature 6 could not be determined in the field. However, it appears as though silt had been deposited in an existing depression left by the excavation of the feature by the prehistoric inhabitants of the site and the discrete change in demarcation between levels 2 and 3 suggest that the pit has its origins approximately 30 cm below the existing surface, an unknown amount of which was removed by construction.

No diagnostic materials were recovered from the feature fill. Twenty gri-tempered sherds with a rather sandy, friable paste were recovered from the pit fill. The average thickness of these small sherds ranges from 3.0 to 4.0 mm and bosses occur on two of the sherds. A tentative assignment to a Middle Woodland component is posited for Feature 6, although such assignment cannot be confirmed based on the small sample of body sherds. Chert debitage, a broken biface, and a hammer stone spall were the only other cultural materials encountered in the pit fill. Figures 11 and 12 portray profiles of Feature 6.

Feature 7 was identified as a basin shaped pit, intrusive into the underlying sand to an approximate depth of 40 cm. Excavation of Feature 7 was conducted in 10 cm levels, but segregation of the overlying silts of a different composition and color were maintained. There can be little doubt that at this location, a Late Woodland sheet midden has been deposited on top of the Feature which is, based on the recovered materials, interpreted as a Middle woodland pit. Cord-impressed ceramics were encountered in the first three levels of excavation below the disturbed surface while the pit fill yielded dentate stamped ceramic sherds. One hundred and forty ceramic sherds including 7 rim-sherds were retrieved from Feature 7 and the overburden. Lithic items included a broken biface, a drill tip and a substantial amount of debitage composed of cores, shatter, and flakes. A shell lens was also encountered in Feature 7 and, again, was removed in matrix.

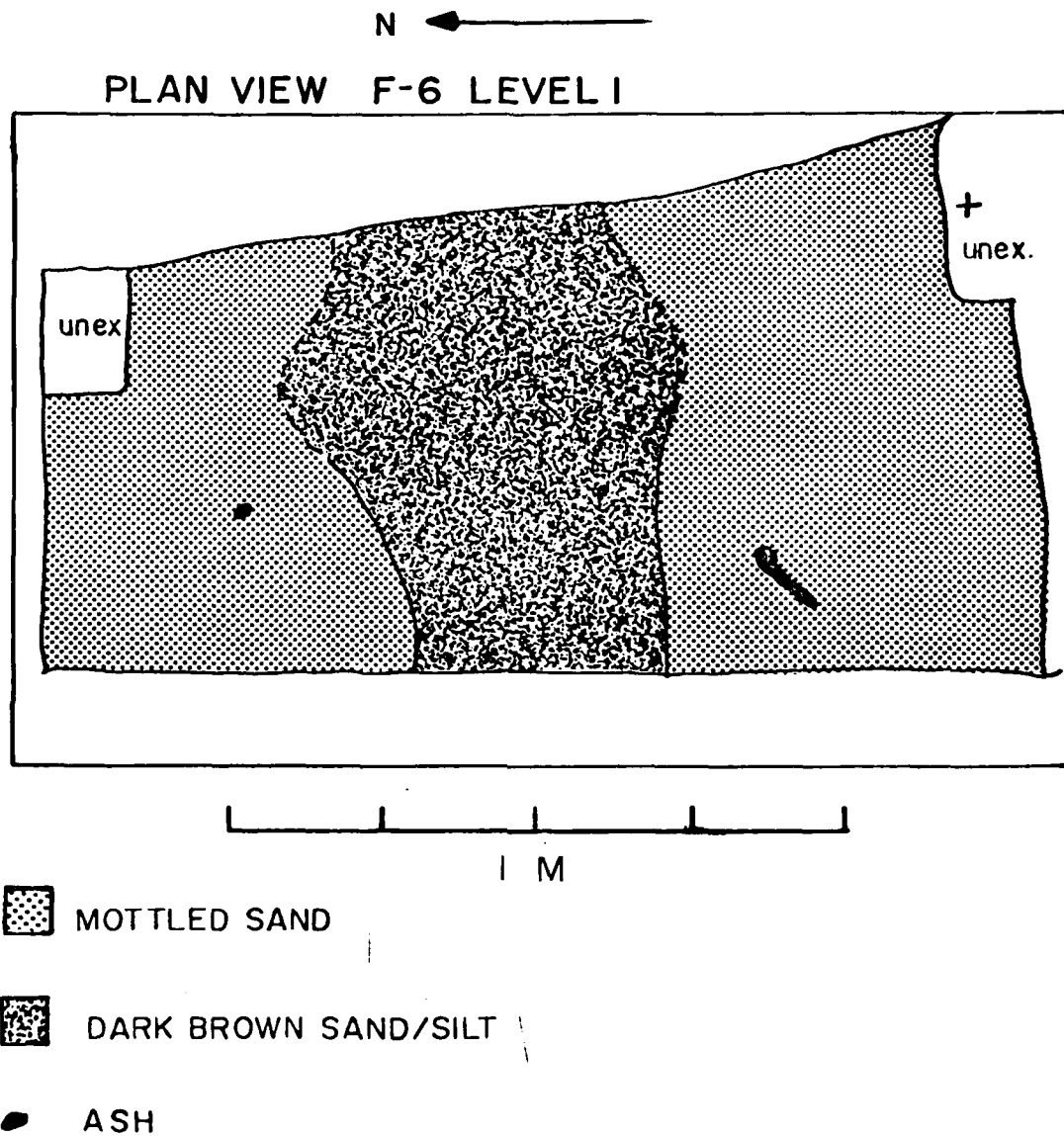


Figure 7: Feature 6, plan view, level 1.

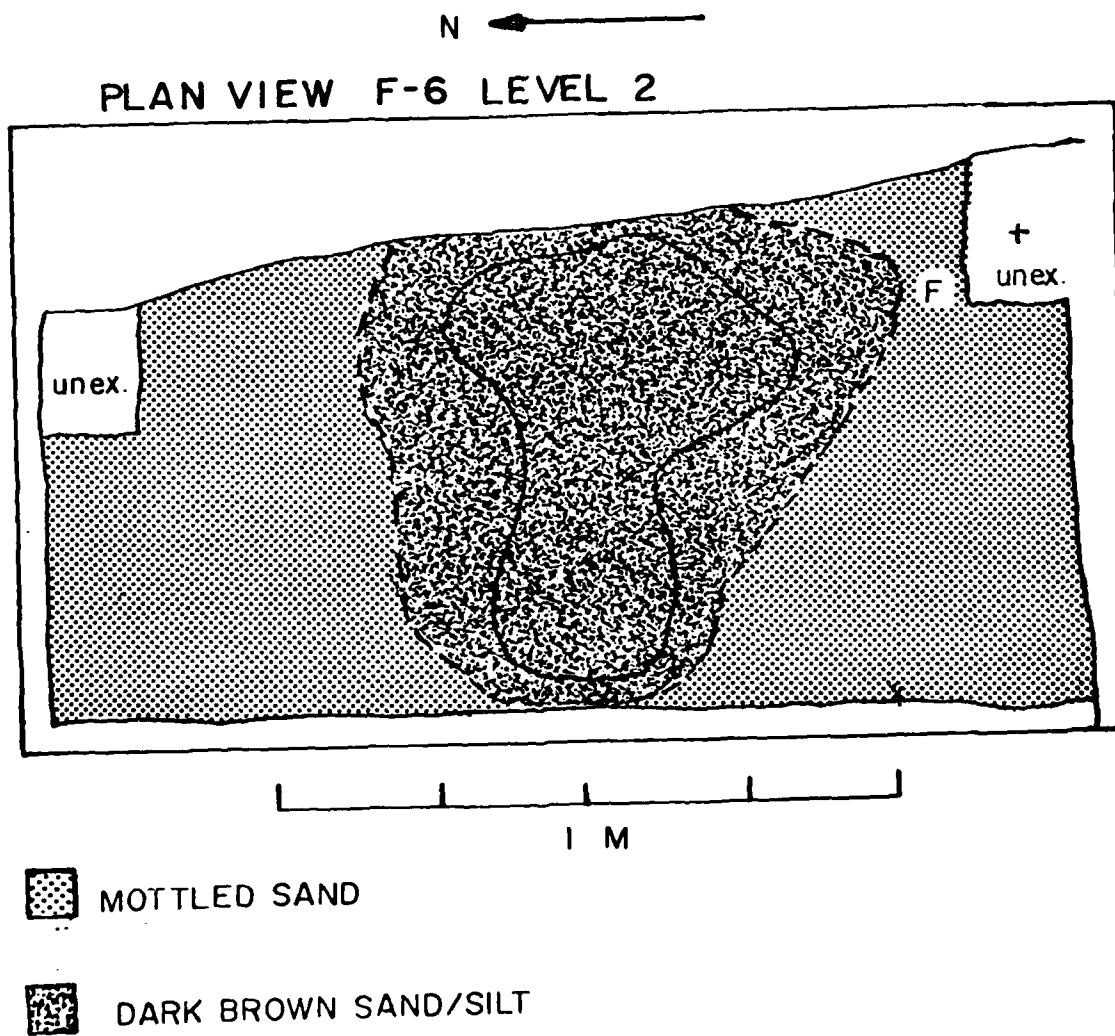


Figure 8: Feature 6, plan view, level 2.

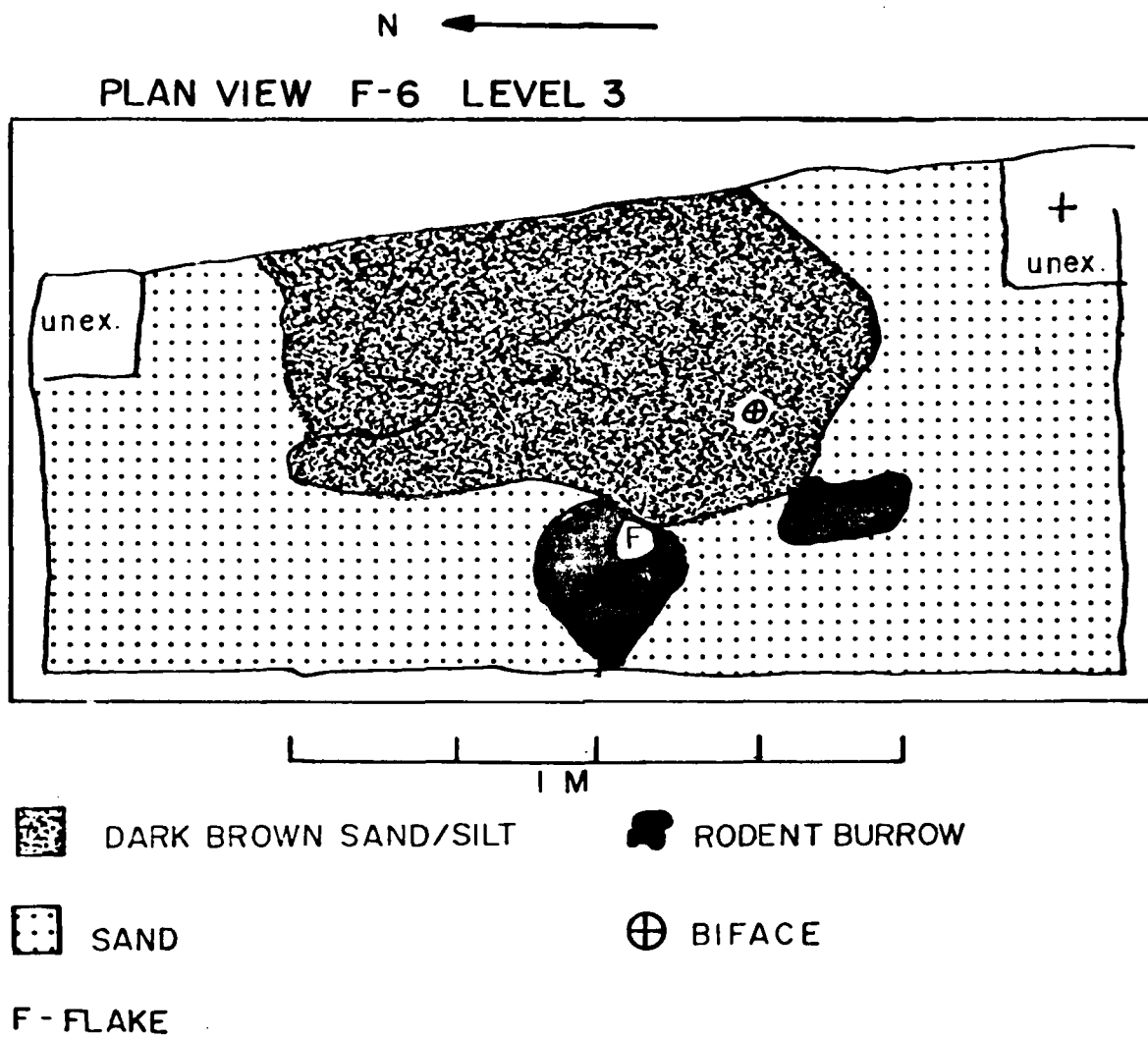


Figure 9: Feature 6, plan view, level 3.

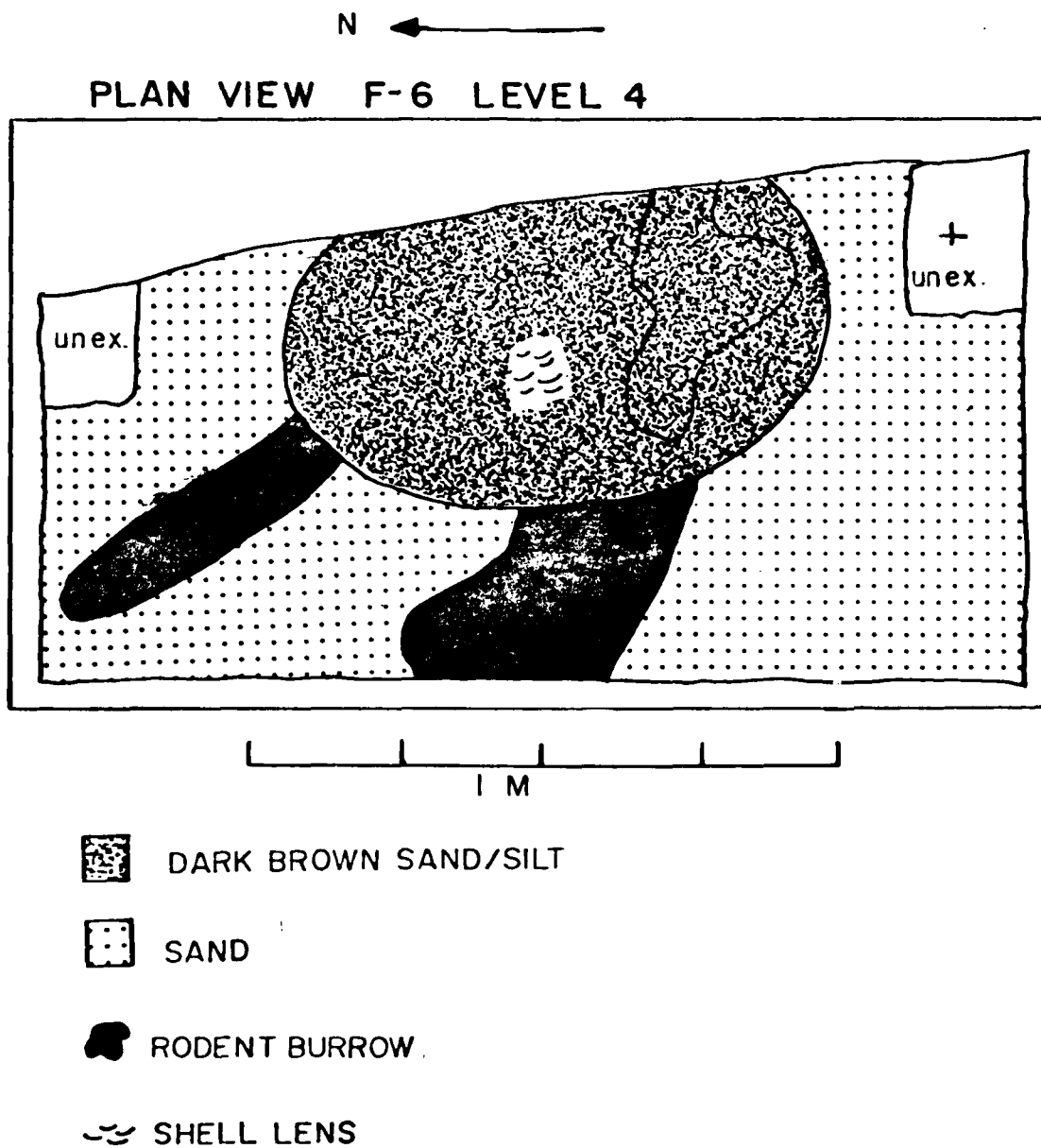


Figure 10: Feature 6, plan view, level 4.

PROFILE, F - 6

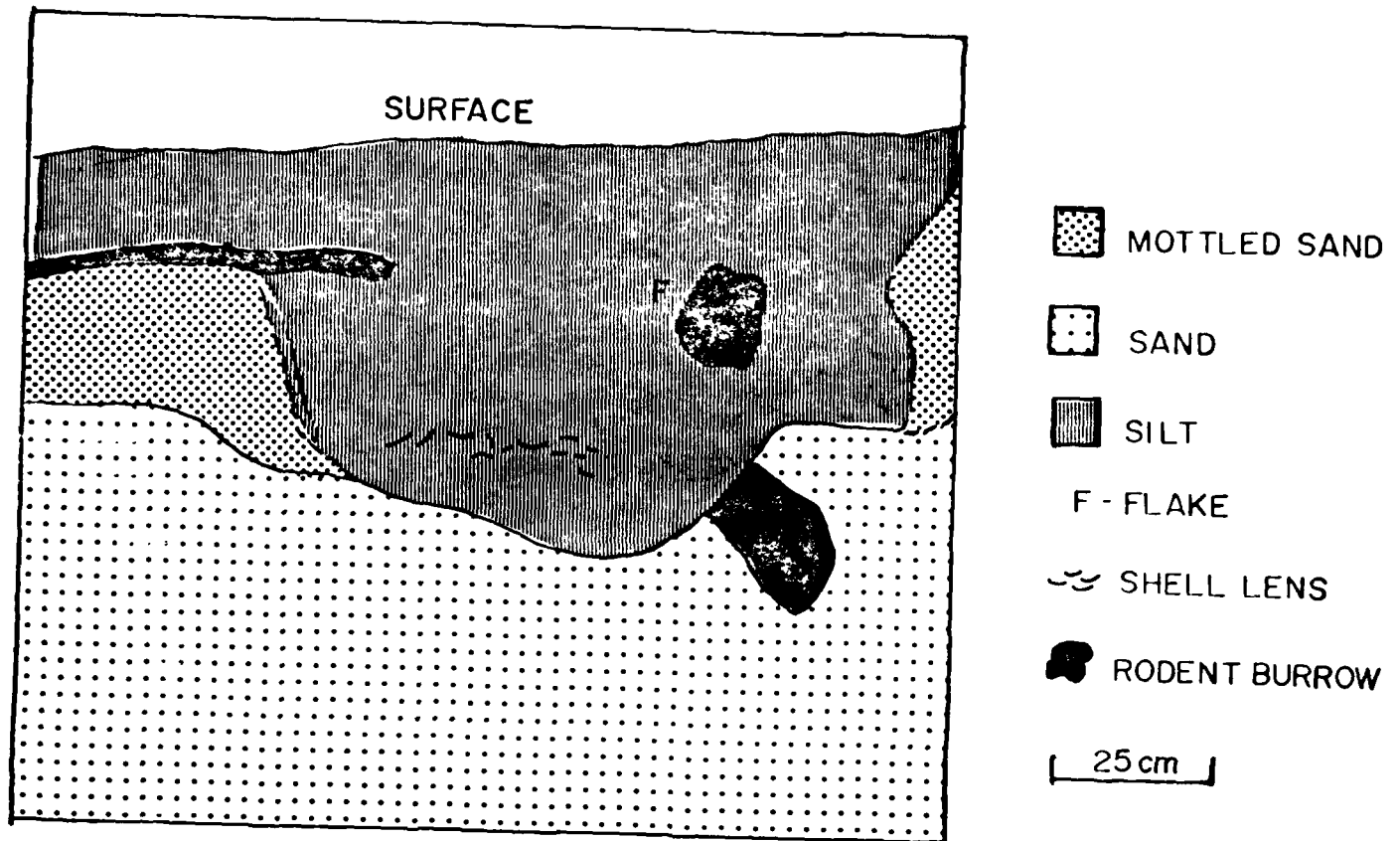


Figure 11: Feature 6, profile.



Figure 12: Profile, Feature 6.

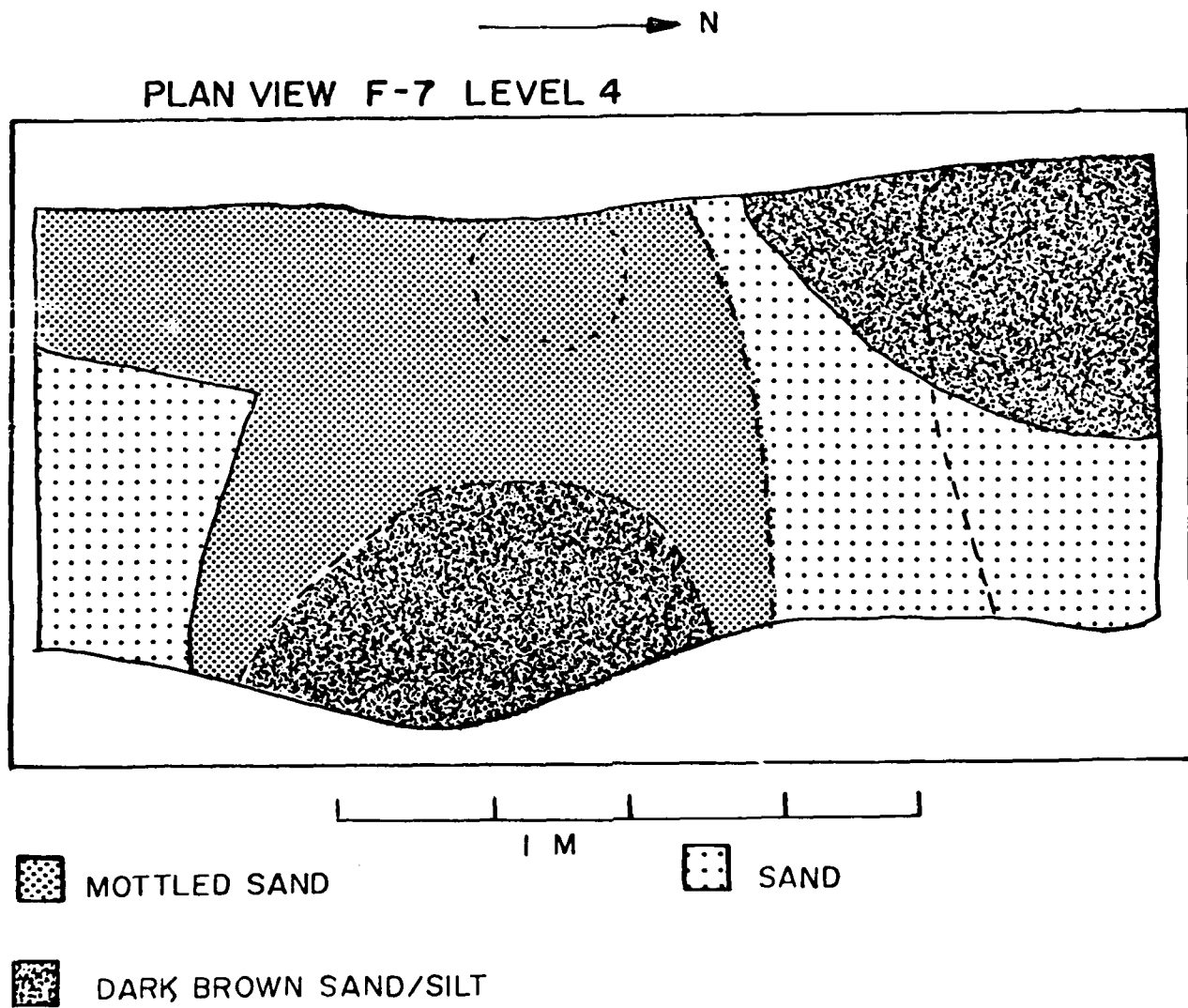
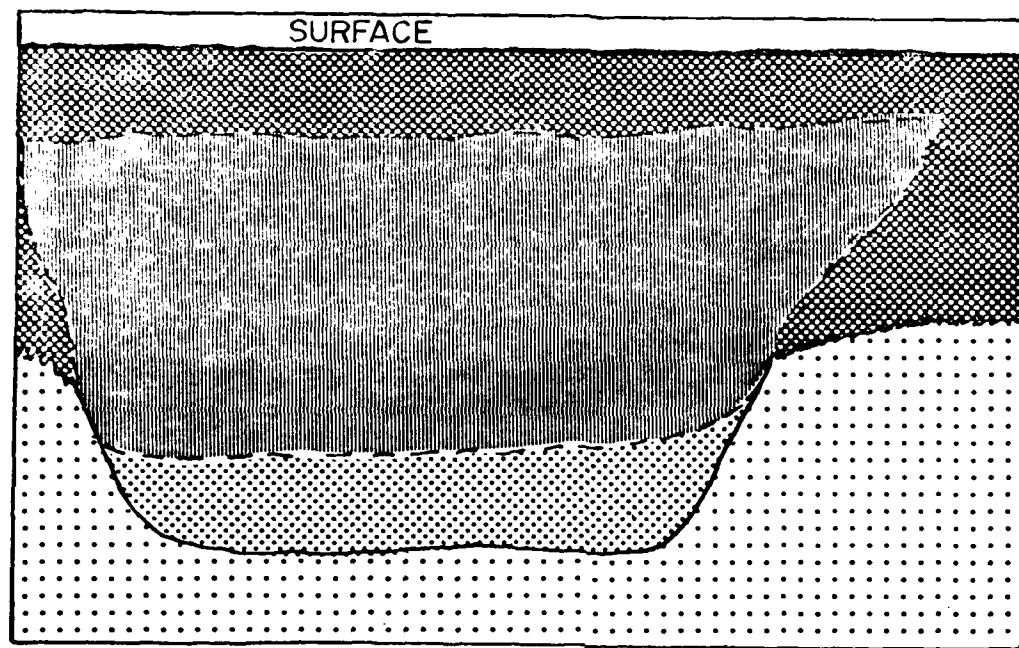


Figure 13: Feature 7, plan view, level 4.

PROFILE, F-7



1 M





-  SILT
-  MOTTLED SAND
-  BROWN SILT
-  SAND

Figure 14: Feature 7, profile.



Figure 15: Feature 7, profile.

Feature 7 has its origins at approximately 30 cm below the surface and the remaining Late Woodland midden, that which has not been removed by construction activities is contained within the 30 cm unit below the current surface. Figure 13 provides a plan view of Feature 6 at 40 cm and Figures 14 and 15 depict profiles of Feature 7.

Figure 7 was hastily excavated as rising pool levels began to undercut the feature and stimulated slumping of the excavation into the barge cut. More than 80% of the remainder of Feature 7, that which had not already been undercut and slumped into the water, was recovered.

Feature 8, indicated in Figures 16 and 17 was not completely excavated. Exposed in the barge cut profile, the vertical face of the pit was troweled to determine its definition, mapped, and photographed. No cultural materials were recovered from the wall scrapings, however, the foreshore was littered with lithic debris that may have been associated with Feature 8. Tires, wood, and loose earth were piled in front of the feature to protect it from erosion until temporary bank protection was established. Figure 18 depicts the erosional activities and bank slumping prior to stabilization and protection of the cut-bank.

Levee Crest Excavation:

A 2 x 2 meter test excavation unit was placed atop the levee crest at datum, which served as the southeast corner of the excavation. An excavation unit was situated at this locus owing to its distinct topographic/geomorphological context. We anticipated that the recent sediment mantle would not have great depth on the levee crest. Excavation with masonry trowels was initiated in 10 cm arbitrary levels. Almost immediately prehistoric materials were encountered; cord-impressed grit tempered ceramics, waste flakes, and shatter. Mixed randomly among the remains of prehistoric activity at 11 Jd 126 were artifacts of more recent eras such as bottle caps, a staple, a hinge, fragments and other modern litter.

The soil matrix in level 1 of the excavation unit consisted of a rather fine dark silt with little abrasive quality. This, in turn was underlain by mottled silty sand to a depth of approximately 50-60 cm. Below this silty sand horizon is the highest elevation of the underlying main-channel landform which has a depth of at least two meters. This depth was ascertained by continuing excavation 60 cm below sterile soil and then coring the bottom of the excavation unit to an additional depth of 80 cm, at which time the sands were so moist as to assume a viscous state prohibiting the removal of a solid core. Profiles of the east and north walls of this levee crest test pit are depicted in Figures 19 and 20.

No features or concentrations, save a localized dumping of modern debris and an animal den, were encountered in this excavation unit. However, the depth of cultural materials

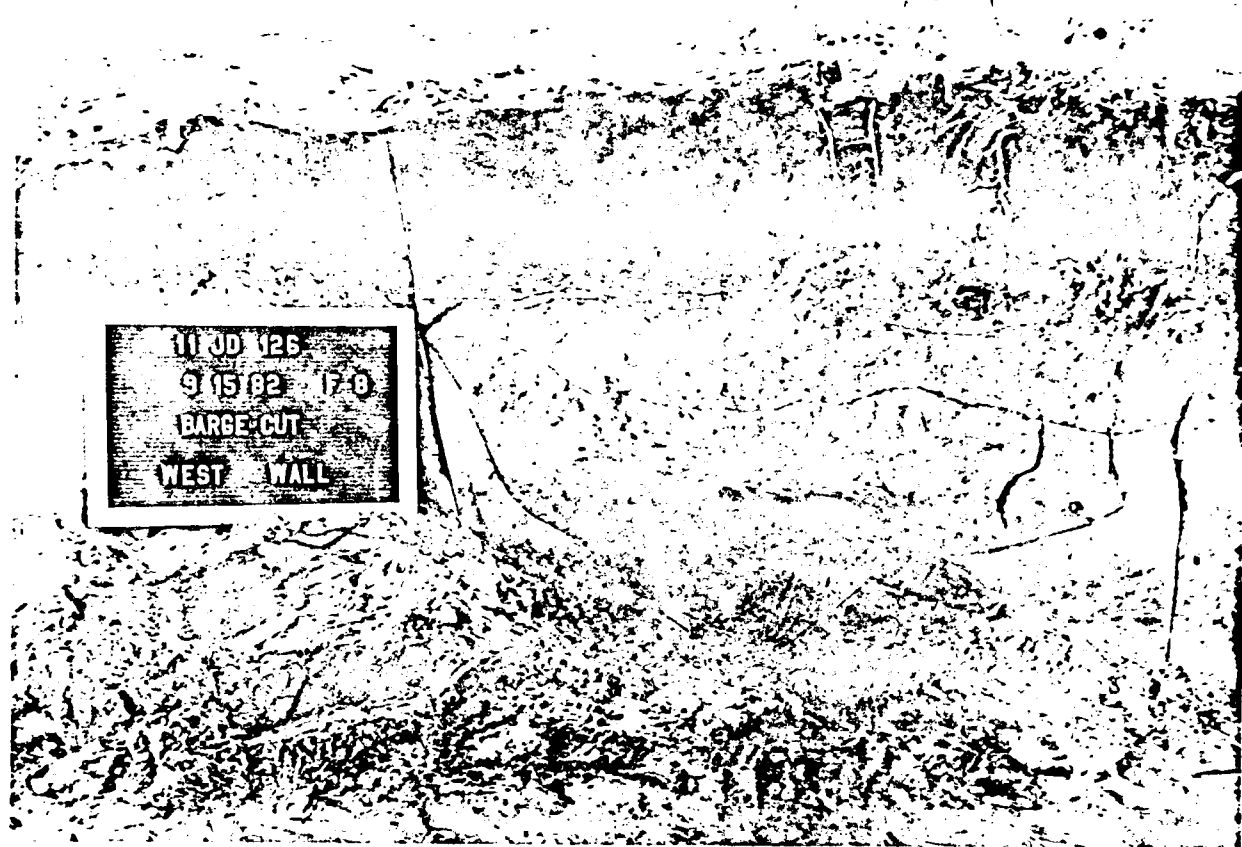


Figure 16: Feature 8, profile.

PROFILE, F- 8

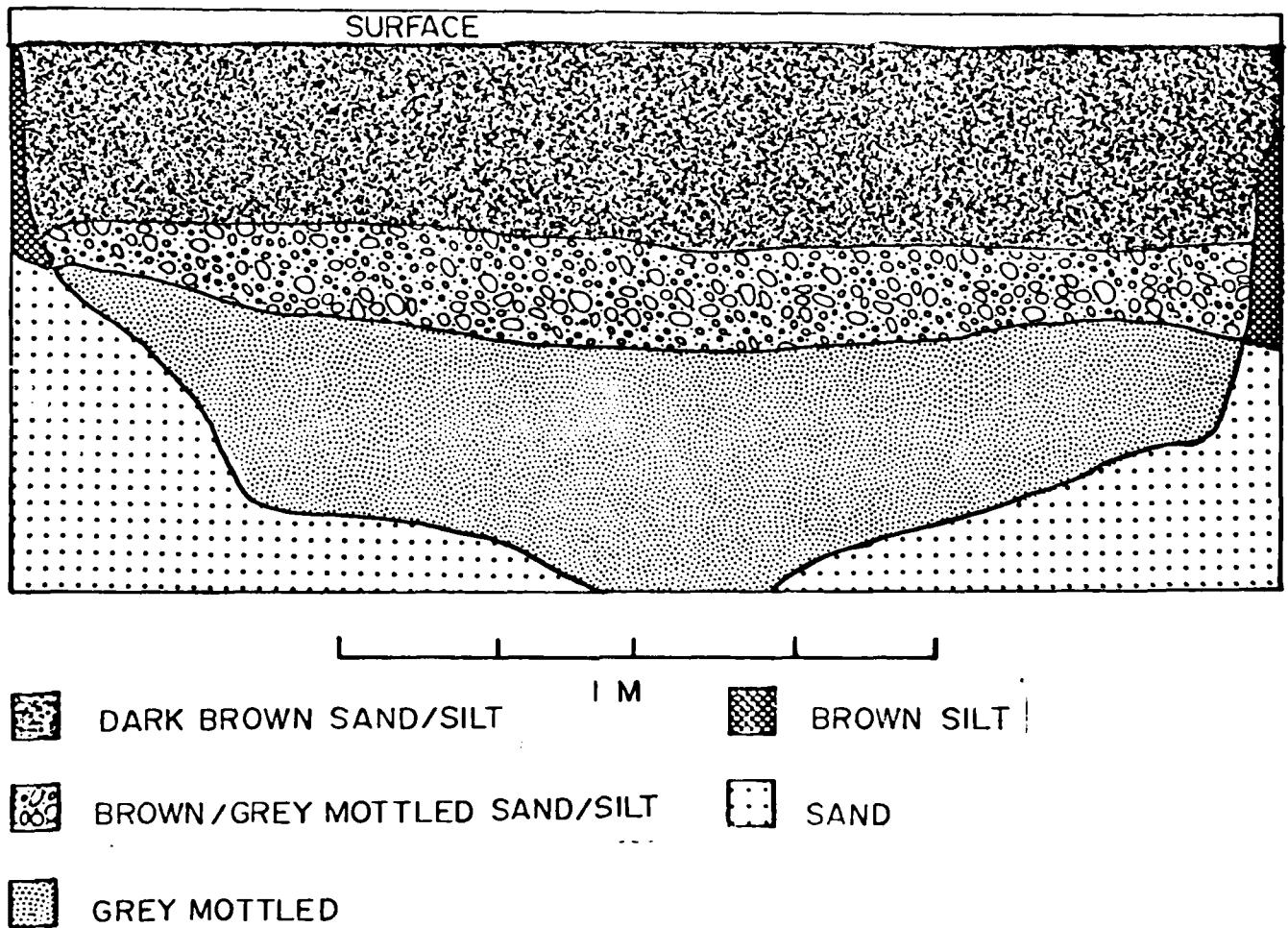
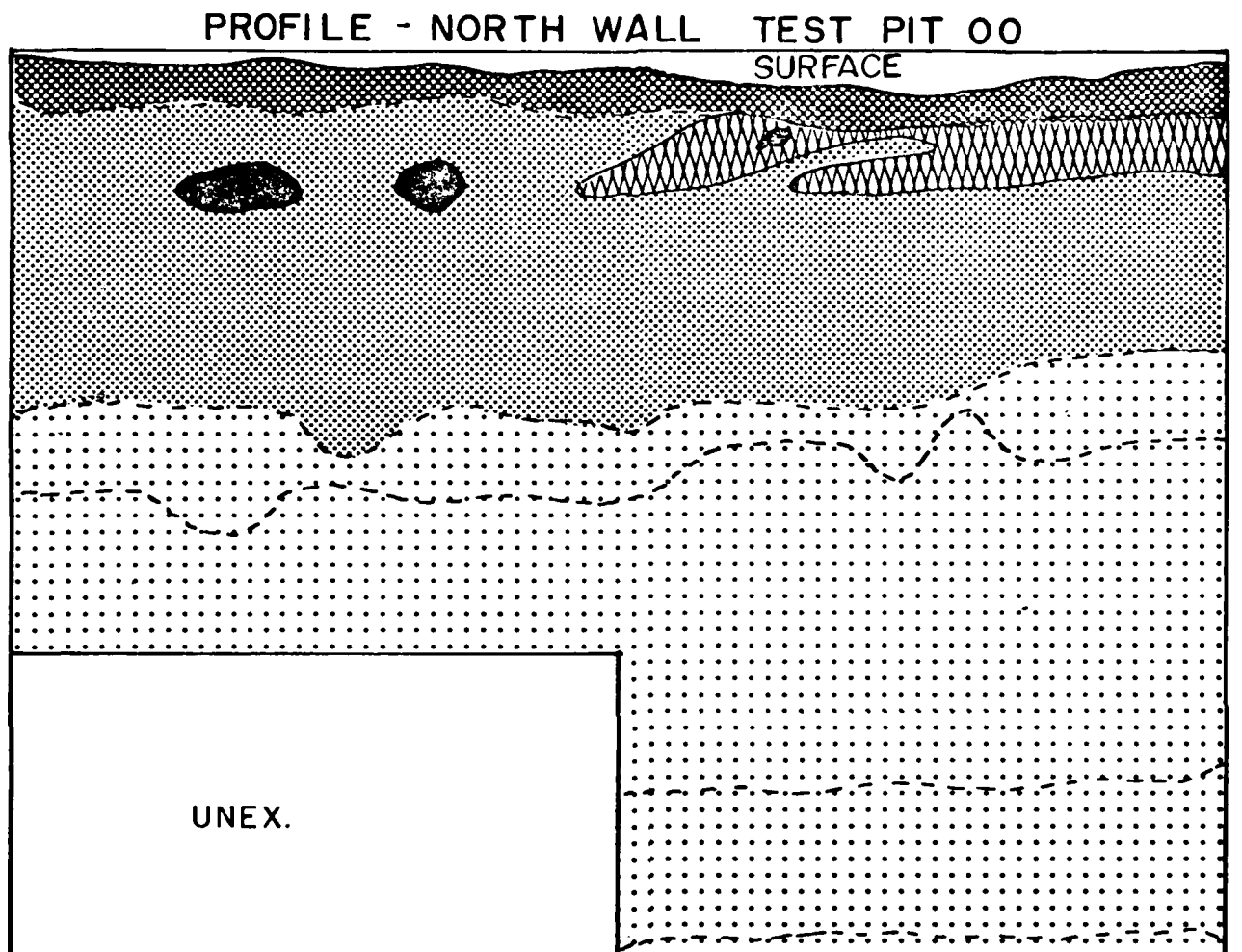


Figure 17: Feature 8, profile.



Figure 18: Erosion of 11 Jd 126 at the west wall of the barge cut.



1 M



BROWN SILT



SAND



CHARCOAL FLECKING



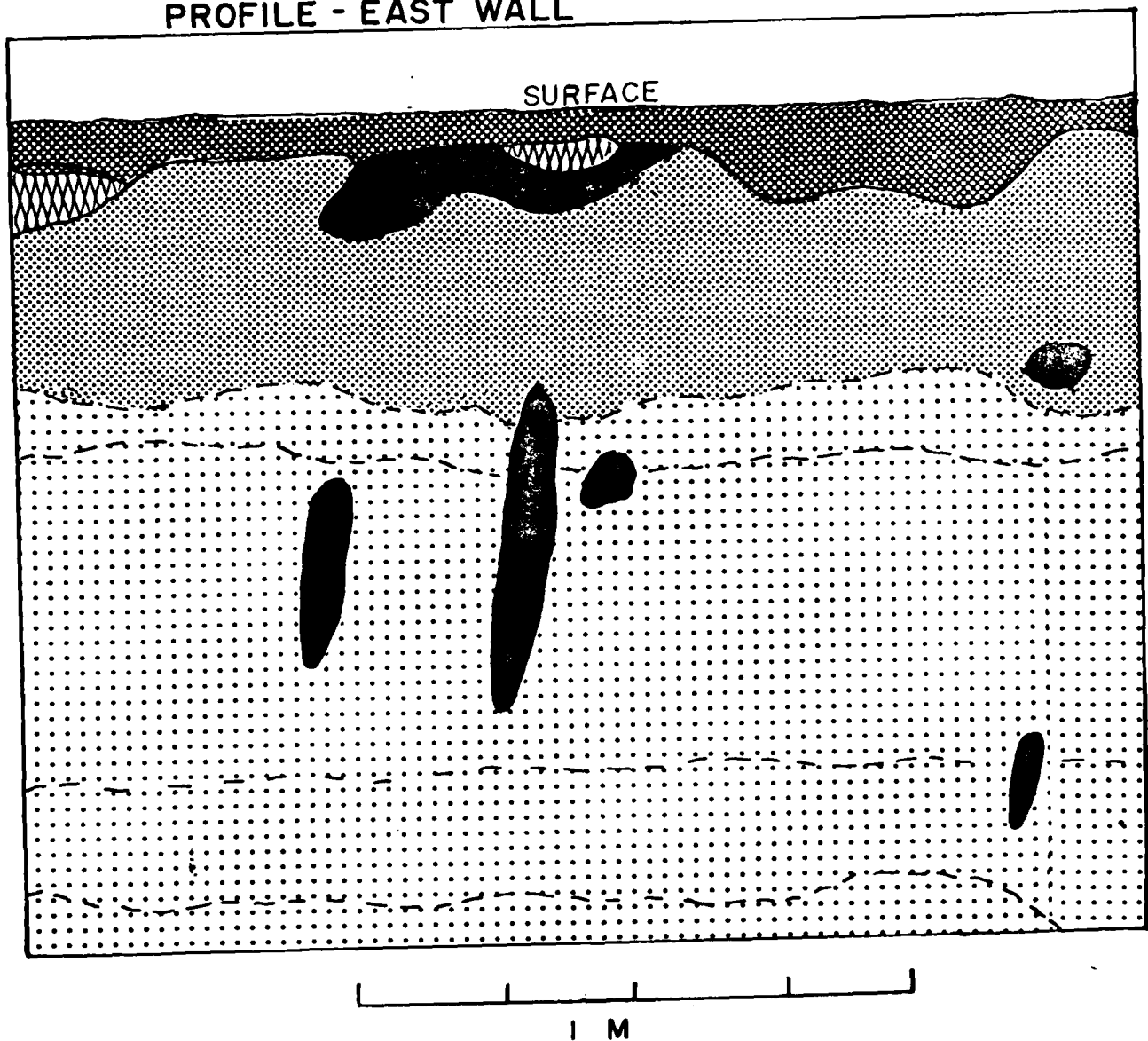
RODENT BURROW/ ROOT MOLD



MOTTLED SAND

Figure 19: Test Pit 0-0, profile, north wall.

PROFILE - EAST WALL








-  BROWN SILT
-  CHARCOAL FLECKING
-  MOTTLED SAND
-  SAND
-  RODENT BURROW/ ROOT MOLD

Figure 20: Test Pit 0-0, profile, east wall.

warrants some commentary. Historic and prehistoric debris were scattered throughout the excavation to a depth of approximately 45 cm. Some of this mixing can be attributed to animal burrowing, root activity, and perhaps, trees that have been undercut and slowly slumped into the river. As well, some admixture may simply be the result of foot travel along the levee crests, a natural pathway at this locality, which would serve to mix debris in the loose sandy soil. Finally, burial of fish remains (recent) and "picnic garbage" is a common byproduct of recent recreational activities, paralleled perhaps only by libation quaffing, judged from the high frequency of bottle openers and bottle caps.

Ceramics in the upper levels are commonly cord-impressed styles that may be accommodated within the Maples Mills type as well as within Madison ware categories. These ceramic types, associated with regional Late Woodland manifestations, are situated atop Middle Woodland materials, an example being a Steuben point recovered from level 7. Cultural materials were recovered to a depth of one meter (level 10) below the present land surface.

Levee Backslope Excavation:

A 2 x 2 meter test excavation unit was situated at 10N-0W (southeast corner) on the levee backslope. Excavation was conducted in arbitrary 10 cm levels using masonry trowels, and, in some instances, skimming shovels.

Aside from a single waste flake, no prehistoric materials were recovered from the first four excavation levels. Historic materials were scattered throughout levels 1-4 including such items as nails, glass shards, plastic, tar paper, brick and metal fragments. Excavations below a depth of 60 cm produced only prehistoric material. No features were discernable in the first 110 cm of excavation, however, a ceramic concentration fostered the segregation of materials by quadrants.

The inability to identify features is considered a function of the homogeneous silts on the levee backslope. The majority of ceramic and lithic detritus was recovered from the southwest quadrant of 10N-0W, and in some instances the matrix was, impressionistically, less compact. At level 7 a concentration of more than 100 ceramic sherds was encountered, and at level 9 the probable feature contained a significant concentration of carbonized wood. The matrix was collected for processing in the lab, both for the recovery of charcoal for radiocarbon assay and for the potential recovery of organic remains.

An irregular, artifact producing stain was relatively well identified at level 11 (100-110 cm below surface). Unfortunately, excavation of this test pit was never completed. That is to say, sterile soil was never reached. Ceramic and lithic debris (2 sherds and 2 flakes) were recovered from level 12. However, once the more than 1 m thick mantle of silt was removed and the sandy substratum reached, water rapidly welled up in the bottom of the excavation unit, undercutting the walls of the excavations, and making it literally impossible to maintain any vertical controls in the loose, wet matrix.

Clearly, the depositional history is quite different than that encountered on the levee crest 10 m to the south of this test pit. Prehistoric materials were more deeply buried, capped by at least 40 cm of recent deposition. As well, sterile soils on the levee crest were encountered at 1.0 m, while on the levee backslope, sterile soils were never reached and cultural materials were retrieved at depths of 130.0 cm.

Both Middle and Late Woodland materials were recovered from 10N-0W, however, perhaps the most notable occurrence was the discovery of cord-impressed ceramics in the pit-like feature at a depth of 70 cm below the surface. Sans rim, the body sherds that can be articulated represent a portion of the vessel neck, have parallel, horizontally applied cord impressions bordered by two rows of knot impressions. Horizontal cord impressions are visible on the interior surface of the vessel as well.

Five different "bands" of silty alluvium could be discerned in the field, however, the interstices were not at all well defined. They were impressionistically defined based on observable differences in color, compactness, and moisture content. As these "bands" may represent different sedimentary episodes, a soil column was taken from the north wall of the excavation unit for laboratory analysis. Figures 21 and 22 provide profile drawings of the north and east walls of the excavations and Figure 23 presents a plan view made at level 11. The probable base of a feature in the southwest quarter of the square is readily identifiable.

Excavations at the "flat"

As previously noted, our intent was to sample the depositional sequence at that area of the site that did not manifest the characteristic rolling topography at 11 Jd 126. However, during the survey work at the site we were able to precisely locate a concentration of burned daub in the exposed cut-bank along Frenress Lake Slough. Earlier surface collections (see Boszhardt and Overstreet 1982) resulted in the definition of this locality where burned

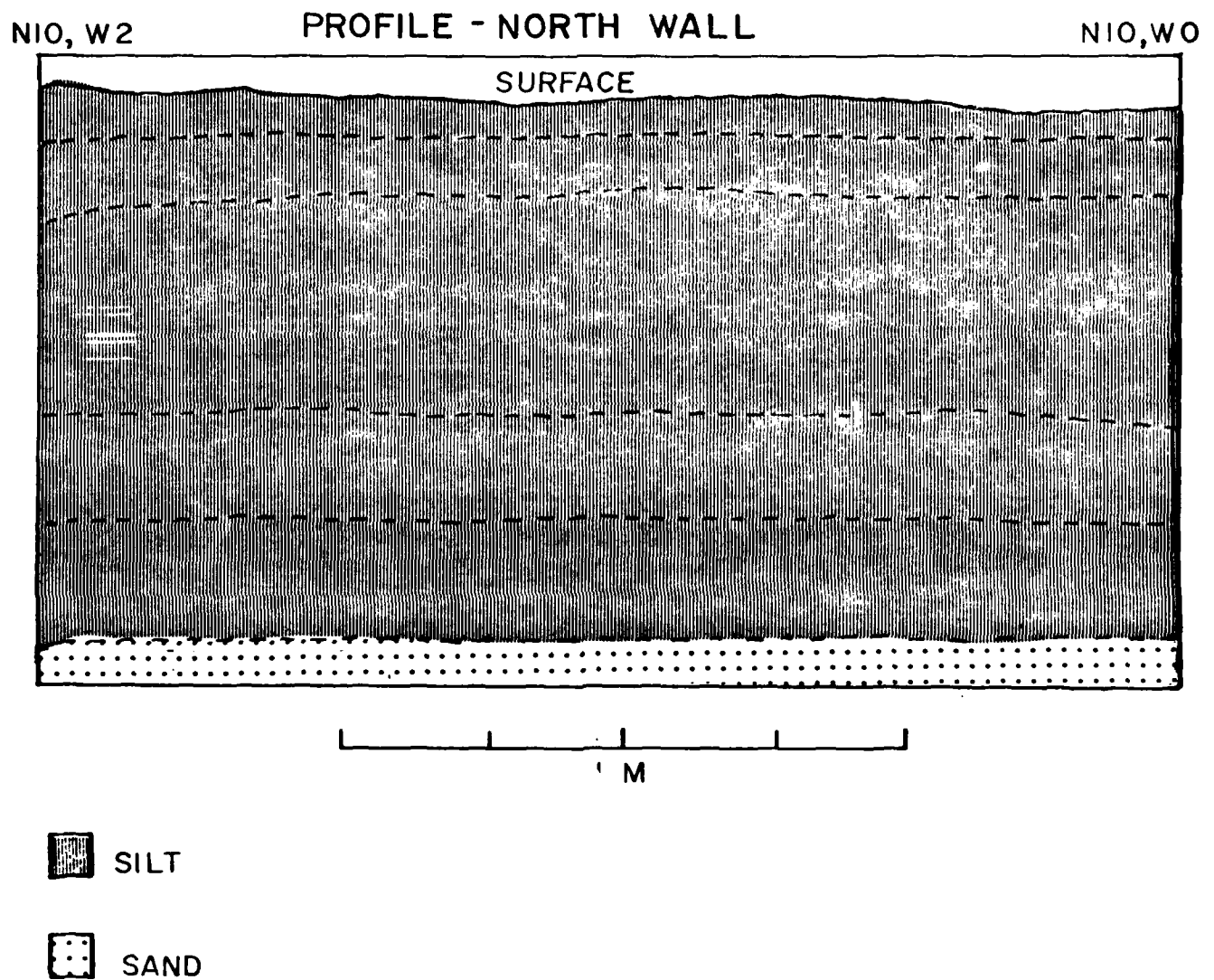


Figure 21: Profile, north wall, 10N-0W.

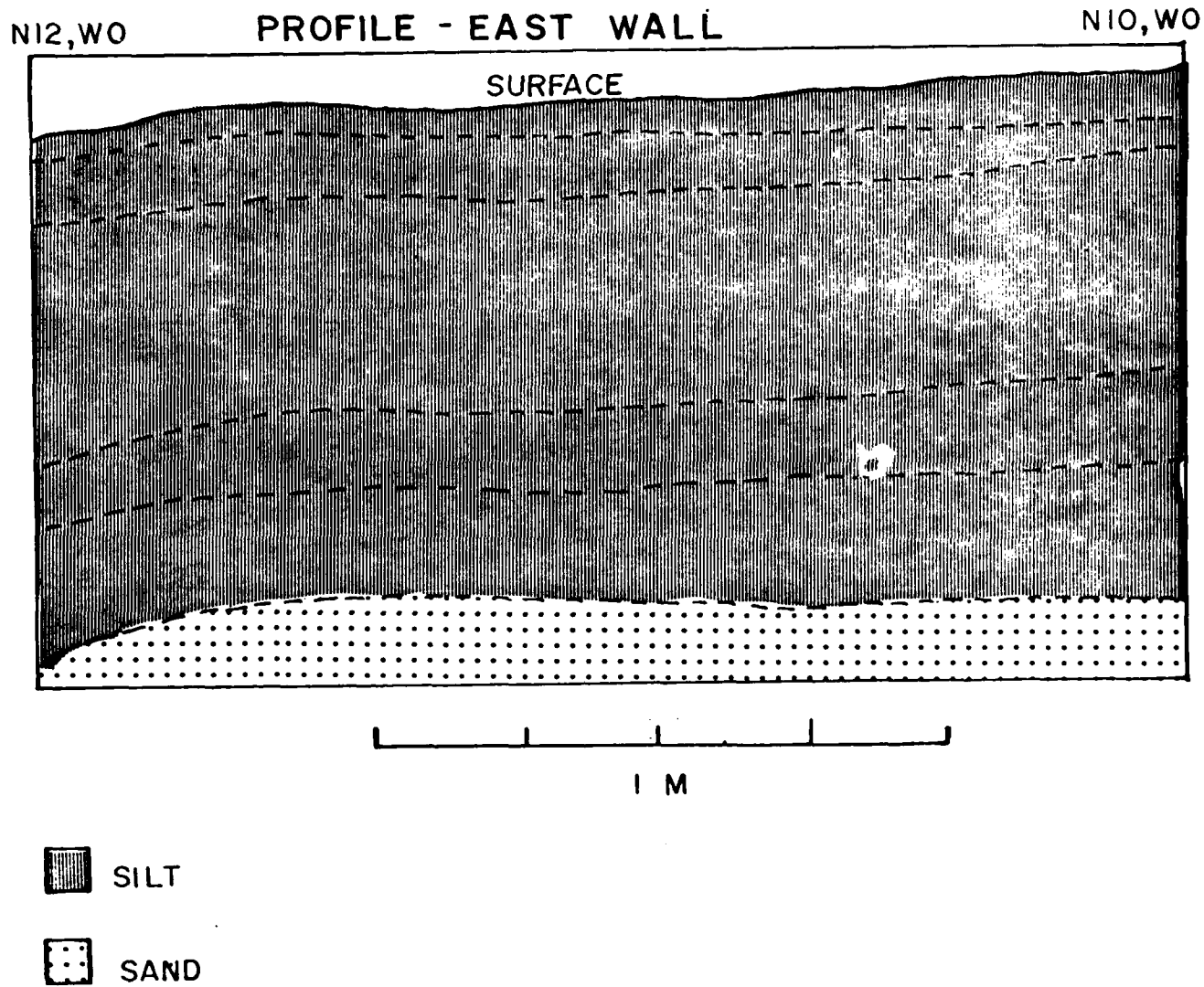
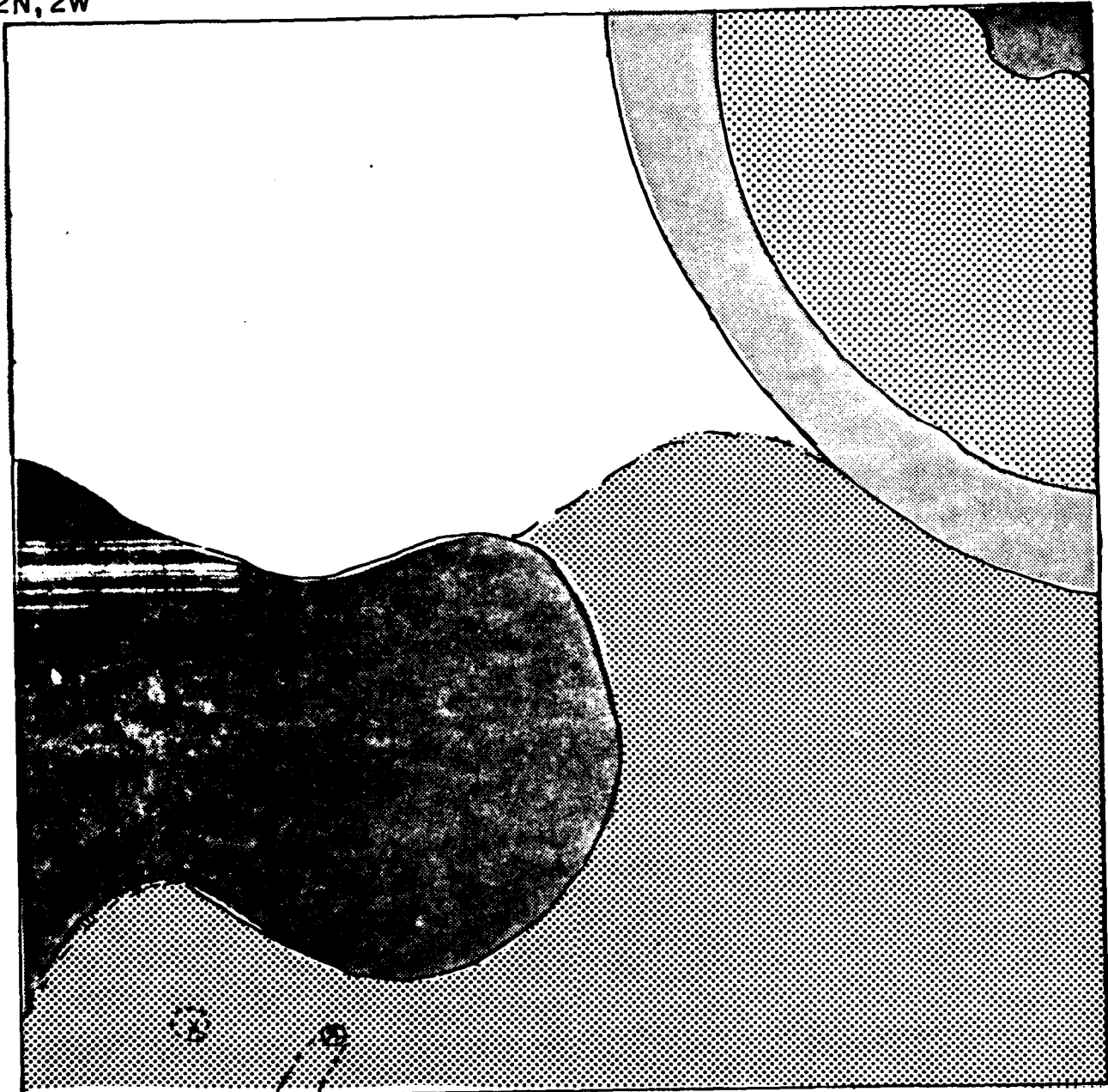


Figure 22: Profile, east wall, 10N-0W.

12N, 2W

12N, 0W



10N, 2W

10N, 0W

PLAN VIEW, LEVEL II (100-110 CM B.S.)

- ☐ GREY/BROWN SANDY CLAY
- ☐ COMPACT GREY SILTY CLAY
- ☐ DARK, MOTTLED WITH CULTURAL DEBRIS
- ☐ MOTTLED SAND
- ☒ ROOT MOLD

Figure 23: Plan view, level 11, 10N-0W.

daub, burned bone concentrations, and prehistoric artifacts including lithics and ceramics had been found.

It seemed prudent to locate our excavation in this area as the daub concentration was actively being eroded by scouring along the lateral margins of Frentress Lake Slough. As well, we thought it would provide additional geomorphological information relating to the flat topography.

After locating the concentration of burned daub in and around the usual dense vegetation, fallen and slumped trees, we proceeded to remove the vegetation to better delineate the concentration. In the exposed profile (see Figure 24), the burned daub appeared as a series of discontinuous concentrations, overlain by a light sandy silt, which in turn was capped by a band of darker silt at the surface. Average depth of the daub was 20 to 30 cm, with greater depths to the southwest along the cut-bank.

Excavation of this feature began in non-arbitrary levels. It had been determined by coring that the daub concentration extended landward from the cut-bank for at least 2.5-3.0 m. Skimming shovels were used to remove the overburden of dark silt, down to the daub level. This level of course was irregular and based on the varying depth of the daub. Two artifacts were recovered from the overburden, both of which were dark grey pieces of chert, spalled and pot-lidded from intense heat. These were initially interpreted as prehistoric items, as, aside from a single musket ball, this area of cut-bank had yielded a significant amount of prehistoric debris.

Following the removal of the silt overburden, a profile was mapped of the cut bank. Because of the southwest-northeast trend of the cut-bank at this locale, the end points of the profile were designated A and A'. Figure 25 depicts this profile. At the northeastern end of the A-A' profile a concentration of slabs of Galena dolomite were encountered. Aside from a single specimen, the slabs had eroded surfaces indicating that they were collected from exposed contexts such as stream beds and did not represent quarried rock. As the profile indicates, the slabs were purposefully stacked and occurred well below the burned daub. As well, depicted in Figures 26, 27, and 28, the two easternmost concentrations, identified as cairns 1 and 2, looked very much like pit features that had been dug into the underlying silts. This interpretation is severely hampered by the erosion at the cut-bank and other interpretations which will be noted later are equally plausible.

Having completed the profile mapping and the horizontal exposure of the daub, the daub concentration was mapped in plan and is portrayed in Figure 29. The decision was made

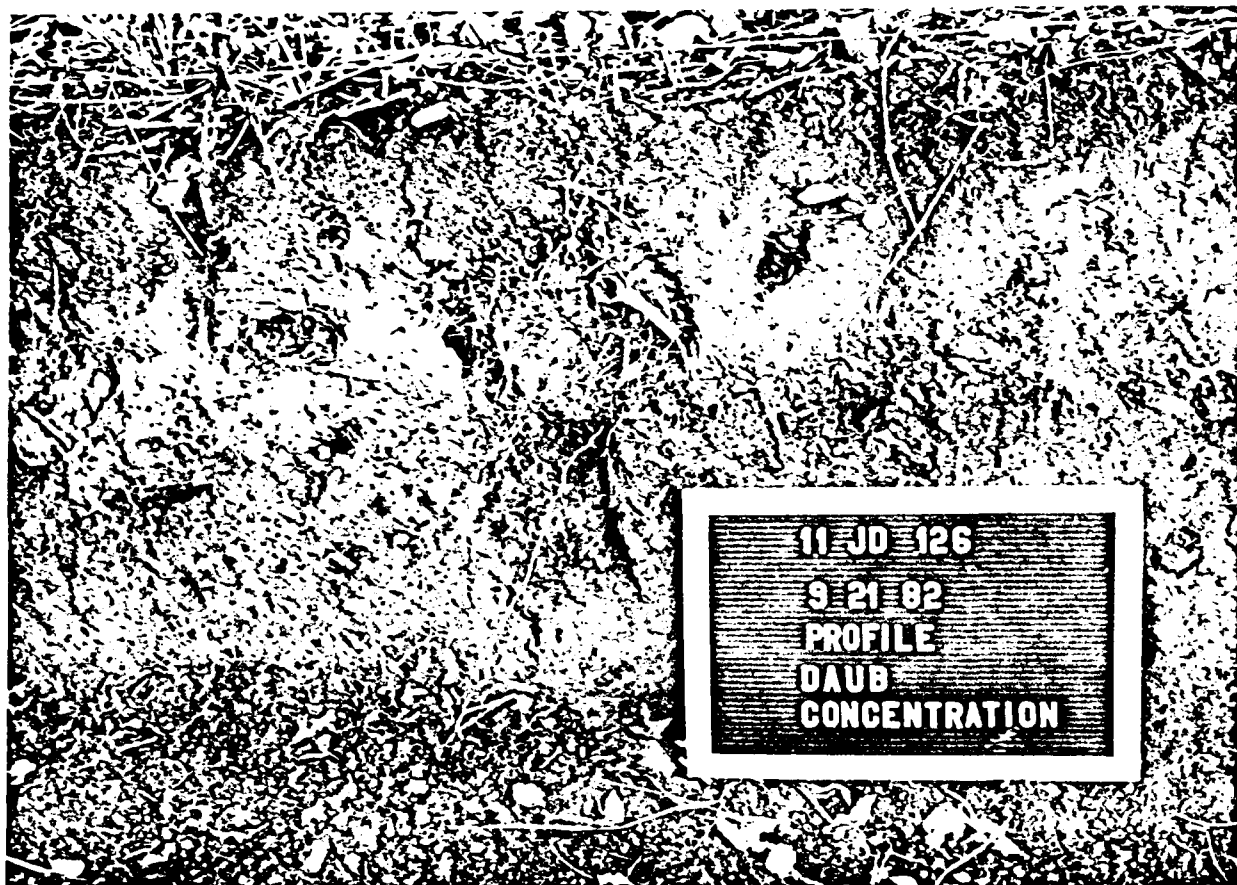


Figure 24: Cut-bank profile, cleared of vegetation.

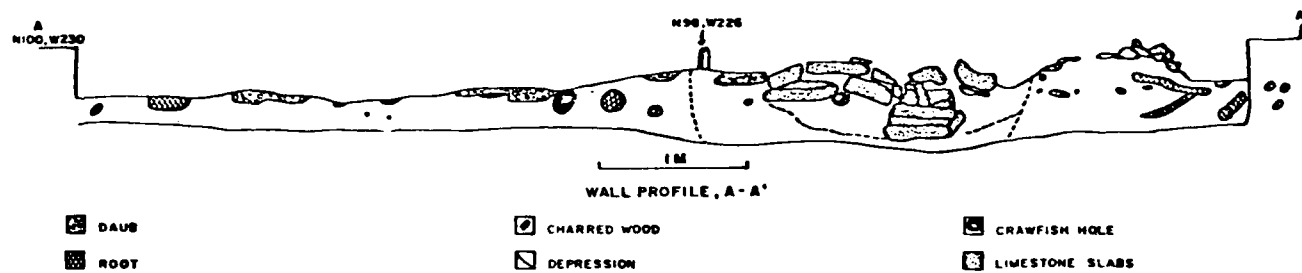


Figure 25: Profile A-A'

at this juncture to establish two balks across the concentration and to excavate a one-meter trench, removing only the loose daub. During the process of this excavation, a gun-flint and a small glass bead were found at the edge of the burned timber. It was clear that the structure was of historic origin. The remainder of the slumped daub was removed and 33 remnants of burned flooring were mapped in plan. The distribution of flooring plank remnants is depicted in Figure 30. Few artifacts were found in the slumped daub layer. A few beads, two glass bottle shards, some small fragments of burned and smashed bone, a kaolin pipestem, and some unidentified metal items were recovered from this level. The paucity of cultural debris on the flooring serves to support the hypothesis that the structure was abandoned prior to its being set afire.

The relationship of the dolomite slabs to the structure is not clear. An obvious possibility is that the slabs represent the remains of a chimney. However, their obvious construction, well below the flooring is not consistent with that hypothesis. As well, the erosion had already disturbed the slab concentration at the northeast end of the A-A' profile and their distribution extended out into the river 3-4 m from the present cut-bank. Additional slabs can be seen in the plan of the flooring. A third possible function of this feature is that it may have related to lead smelting or processing. Historic extraction and processing of galena is well documented in this region, both by aboriginal and Euro-American inhabitants (Boszhardt and Overstreet: 15-16). This possibility notwithstanding, no clinkers, a single lead sprue, no slag, or other predictably associated items were found during the course of excavation of the structure. A fourth possibility, that the features functioned as storage cairns or pits for food or other commodities cannot be discarded. It is unfortunate that previous disturbance has resulted in such equivocal interpretation of the slab feature, by its very nature, indicative of some effort to transport the dolomite from creeks that bisect the escarpment about a mile from the site.

The third stratigraphic level, the floor, was removed plank by plank, and the highest frequencies of artifacts were found sandwiched between the floor planks, or, in several cases, underneath the planks. The interpretation of these items that include gun-flints, beads, swan shot, small shot, metal items, heavily oxidized so that electrolytic cleaning will be necessary for identification, and a diminutive silver brooch pin, is one of incidental loss on the floor of the structure in a random manner. Small items simply fell, or worked their way under, the floor planking. Significant numbers of floral and faunal remains were also recovered at this level. Most of the bone, calcined, smashed, and burned is unidentifiable. However, the floral remains, that include beans and corn, are completely carbonized and well preserved. One notable occurrence of carbonized floral remains was a small pocket of beans, cached by a rodent under the flooring. Absence of his

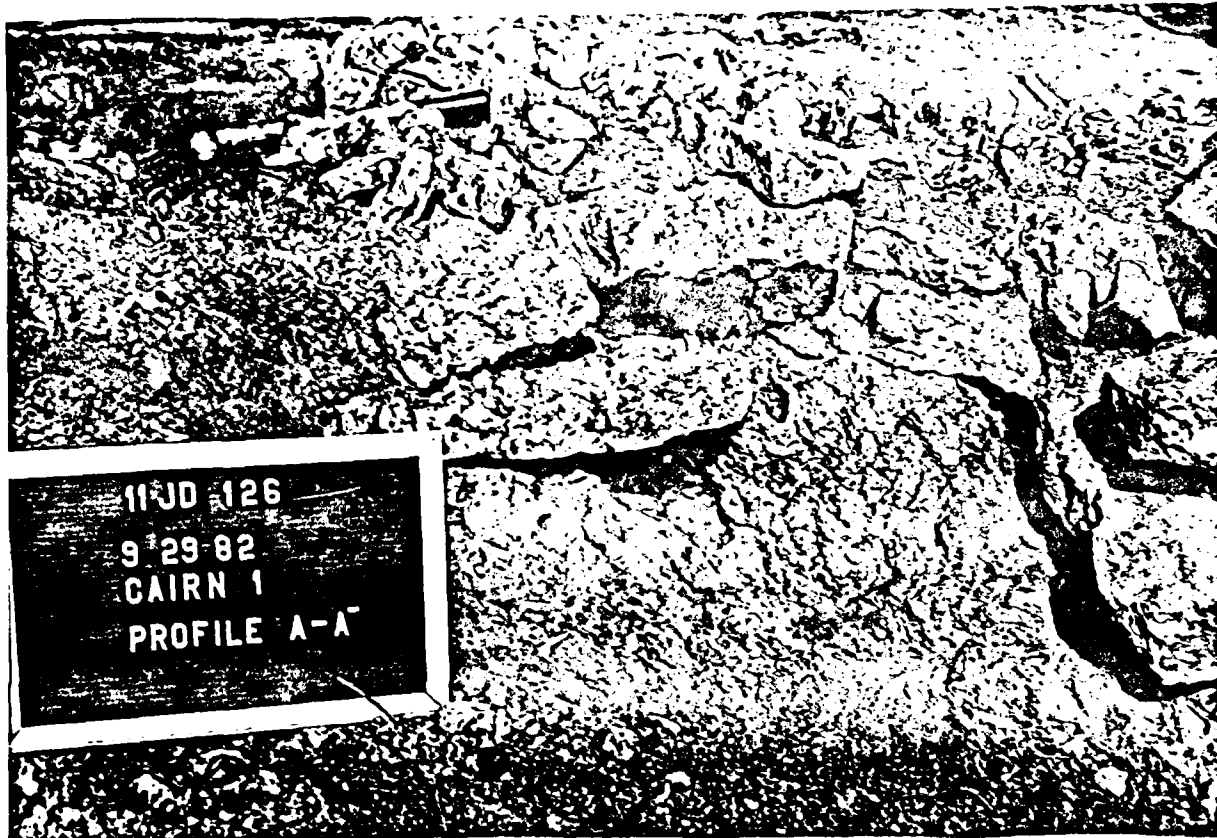


Figure 26: Profile A-A', cairn 1.



Figure 27: Profile A-A', cairn 2.

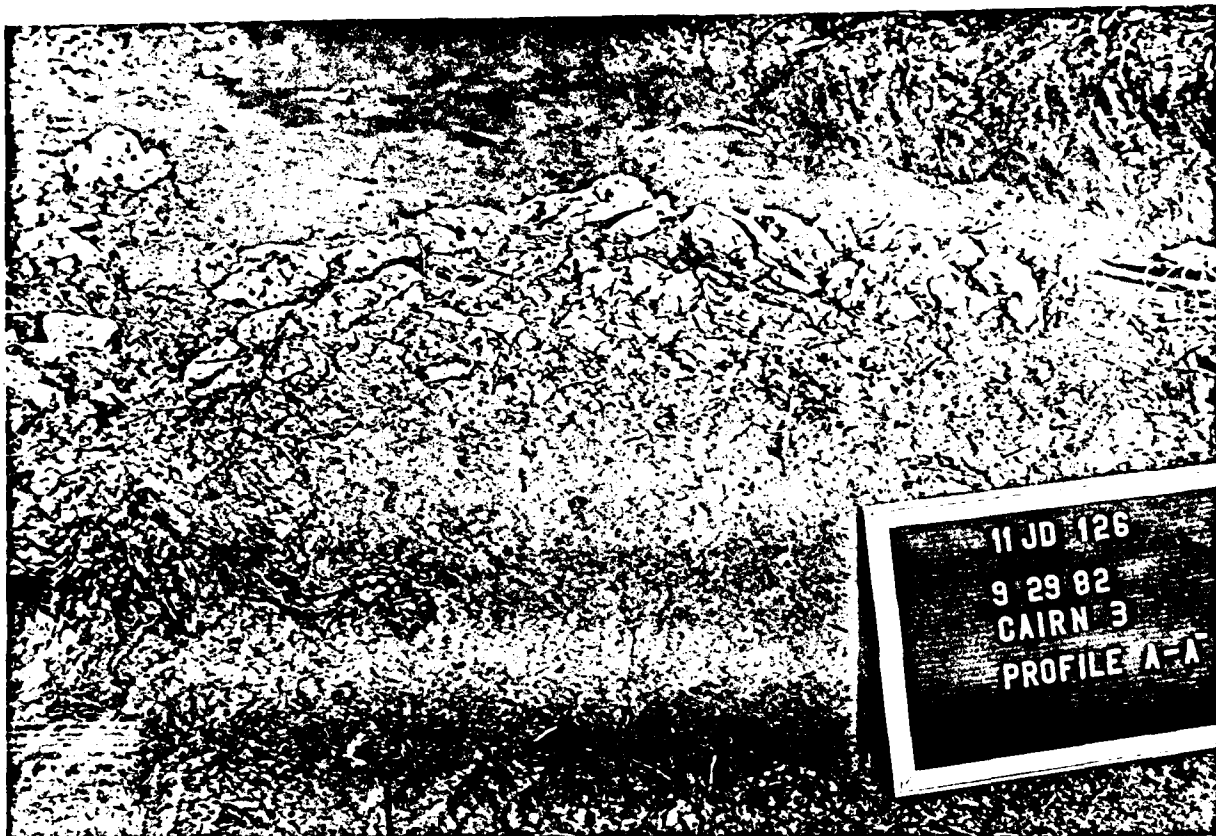


Figure 28: Profile A-A', cairn 3.

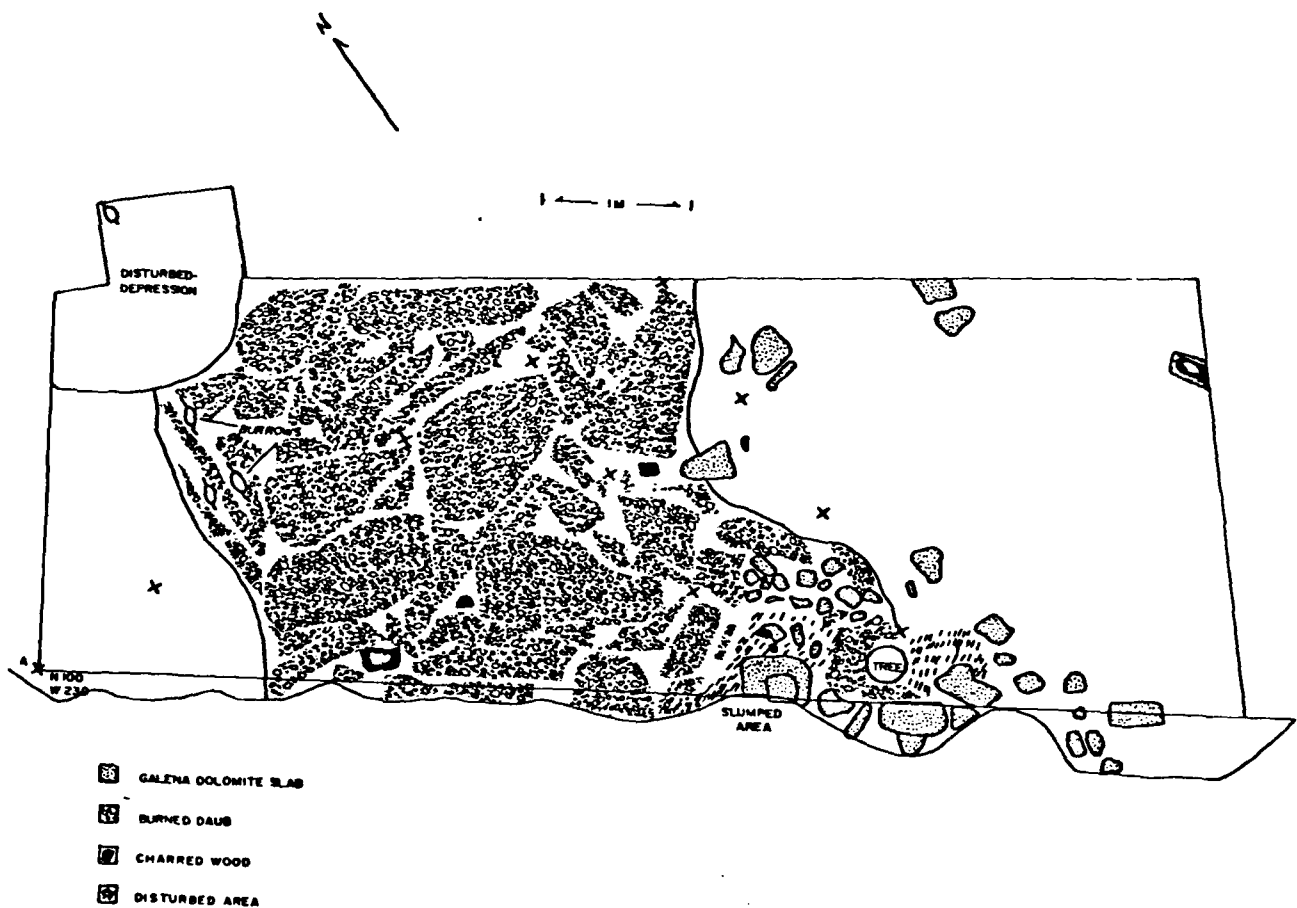


Figure 29: Plan view, daub concentration.

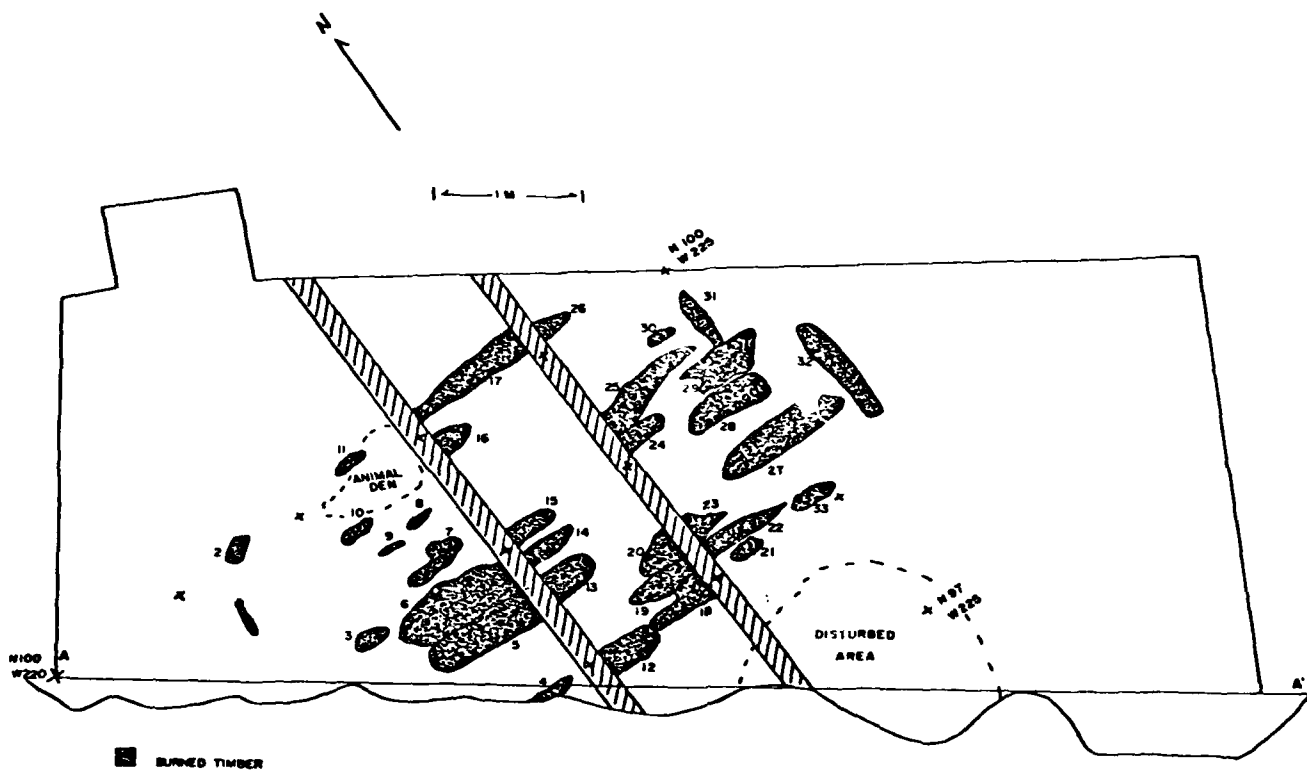


Figure 30: Plan indicating floor remnants of structure.

remains suggest he was not in his abode when the house was burned.

Once the flooring and associated matrix had been removed, the fourth and final stratigraphic level was excavated. This consisted of an approximate 15 cm. increment and included the remains of carbonized posts, daub features on the east and west walls, and the apparent threshold of the structure. Five posts, burned in place were identified on the north wall of the structure. The east and west walls, the latter of which was the location of the structure entrance, had no vertical supports. The plan of the sub-floor level is depicted in Figure 31 and balk profiles are presented in Figure 32.

Based on the architectural data recovered during the excavation, reconstruction of the building techniques is possible. As well, historical documentation can be utilized in support of the reconstruction. The first apparent task in constructing the house was to clear and level the construction site. Following this, post-holes were excavated for the vertical uprights. An interesting phenomenon here, is that the posts selected for the uprights were apparently smeared with plaster at their bases, or, plaster, made of local silty alluvium mixed with sedges and grasses, was packed down into the post-holes around the uprights. This process may have served to preserve or "water-proof" the uprights below the ground surface. This can only be confirmed for the north wall of the structure, the south wall having been lost to erosion. The east and west walls were fabricated in a different manner.

No vertical supports were seen in the excavation of the east and west walls. This is the likely result of using a post-on-sill construction for those two walls. Figure 33 portrays the distinctions between post-on-ground and post-on-sill construction techniques. The historic structure at 11 Jd 126 represents a combining of these techniques.

Once the superstructure was raised, the walls were plastered inside and out, particularly apparent on the west wall as evidenced by the dual streaks of daub. Following the plastering, the flooring was laid. Again, this is inferred from the fact that the plaster, actually the burned plaster or daub, extends below the flooring and around the posts. Once the plaster had set, roofing materials of an archaeologically undetermined nature were applied to finish the structure. Very likely the materials were lath and vegetation covered over with dirt. In summary, the structure shares many similarities with an 1802 wintering post of the XY Company reported by Oerichbauer (1982).

Ethnohistorical accounts provide additional insights. George Nelson, for example, a clerk for the XY Company

II JD 126 DAUB STRUCTURE N-S PROFILES

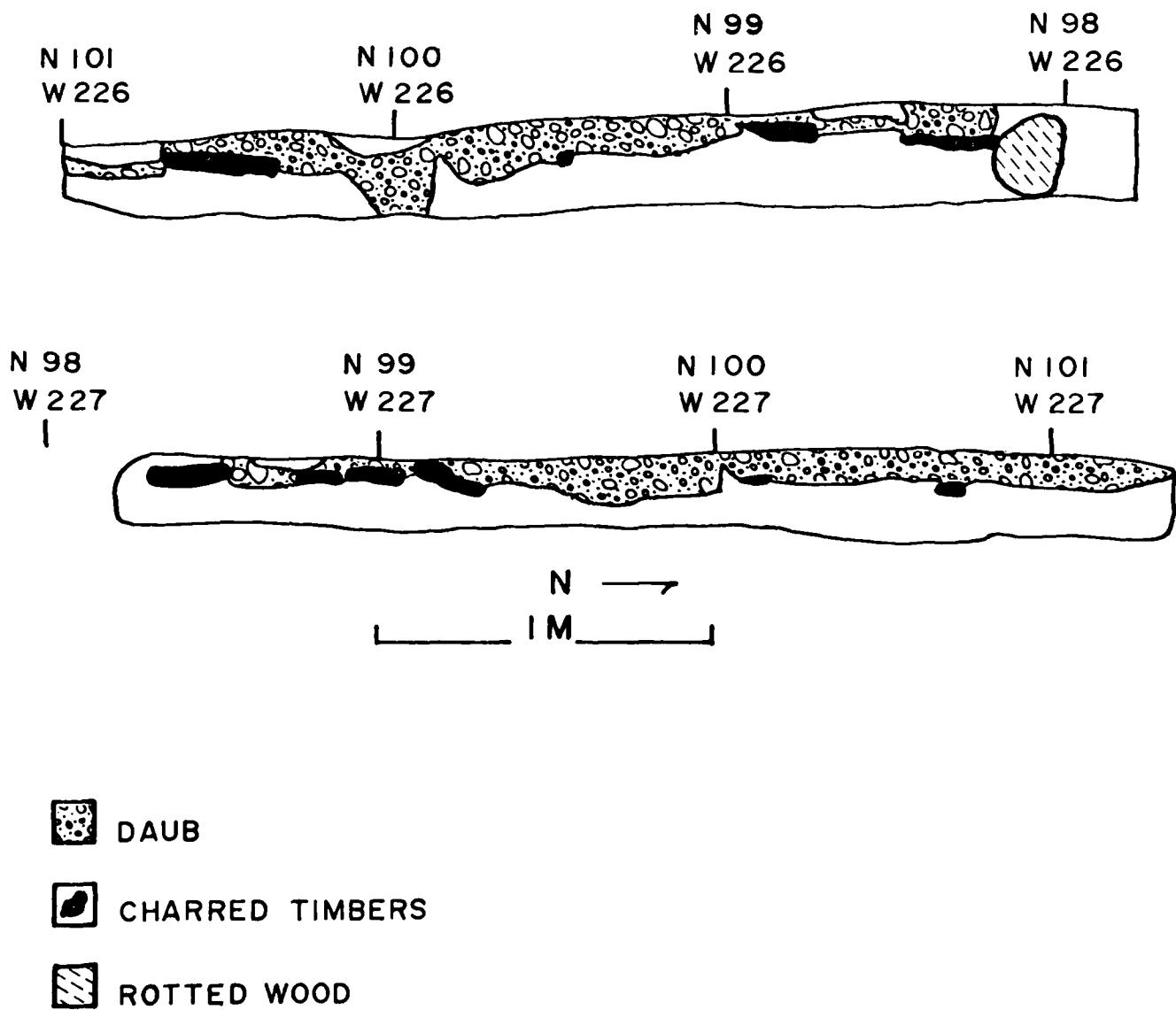
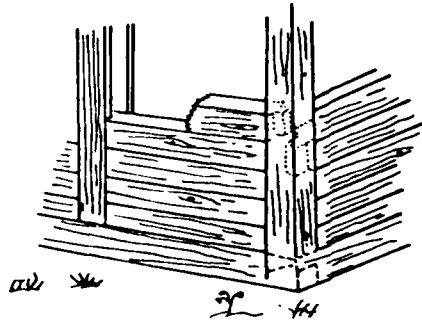


Figure 32: Balk Profiles.

POSTS ON SILL CONSTRUCTION



POSTS IN GROUND CONSTRUCTION

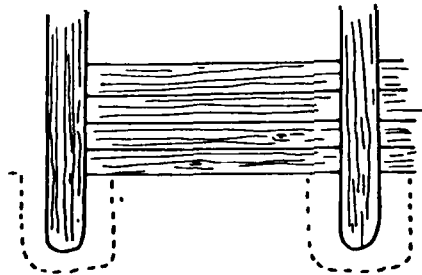


Figure 33: Constuction techniques (courtesy of Edgar Oerichbauer, Burnett County Historical Society).

during the years 1802-1803 describes construction techniques witnessed during his years in the trade:

We did not make palaces, -ours was about 16 or 18 feet long, made thus: - We built up the two sides, say five & a half, or perhaps six feet. These are secured by two stakes at each end, as a common rail fence, and braced by a good strong stick, the whole breadth of the house, & notched at each end, to lay on the sides to prevent their moving. Then two trenches werein to plant or set the ends upright, & of the same size as the sides. Two strong posts in the middle, to receive a ridgepole, two & a half or 3 feet higher than the sides, so that the roof, which consists of straight poles or split slabs, when the timber admits, may have sufficient slope for the water to run off. An opening is left at one end; that part below the cross stick or beam, for a door, & that secured by a pole bound with good strong withes, to prevent their falling. The whole is well plastered, the Shop only on the outside, as some of it will fall & dirty our furs or spoil our grease, meat, etc, but the house is plastered on both sides, inside & out. The joints between the roofing is also plastered; carefully covered about a foot thick with grass which we cut with our knives, & four or five inches of ground thrown on to prevent its being blown off, also as a preservative against fire. The window is made of the thinnest parchment skin we can procure. The chimney in one side of the house, part of stone when handy, but most commonly of earth made into mortar & wrapped in grass. The doors of slabs split with the axe & then Squared down. The floors, when good wood to rive, cannot be had, is squared from trees & then with a hoe, which we sharpen with our files, for we cannot take in grind stones. Our beds, two posts at the head & foot with a stick fixed one in the post & the other in an auger hole (when we happen to have such article) or forced into one of the chinks of the house. The door is secured by a wooden latch, & a leather thong to raise it from the outside. Thus the house is finished & surely simple enough it is (1947: 152-153).

This does not mean to suggest that the structure is an XY post, but rather to indicate significant similarities in the archaeological record with those described by Nelson at the turn of the 19th century.

Daub samples were collected from each provenience unit and several examples are provided in Figures 34 and 35. Their utility for further analyses include investigation of



Figure 34: Daub samples, 11 Jd 126.



Figure 35: Daub samples, 11 Jd 126.

the paste (local or non-local alluvium?), observation of vegetation casts to identify the plant species used in mixing the plaster, and additional construction details. Many of the daub samples have smoothed surfaces and were obviously interior or exterior faces. As well, the various depressions where the plaster had been pushed or smeared up against the walls or joints provide opportunities to reconstruct the diameter of the lath or withes in many instances providing greater detail on architectural methods and techniques.

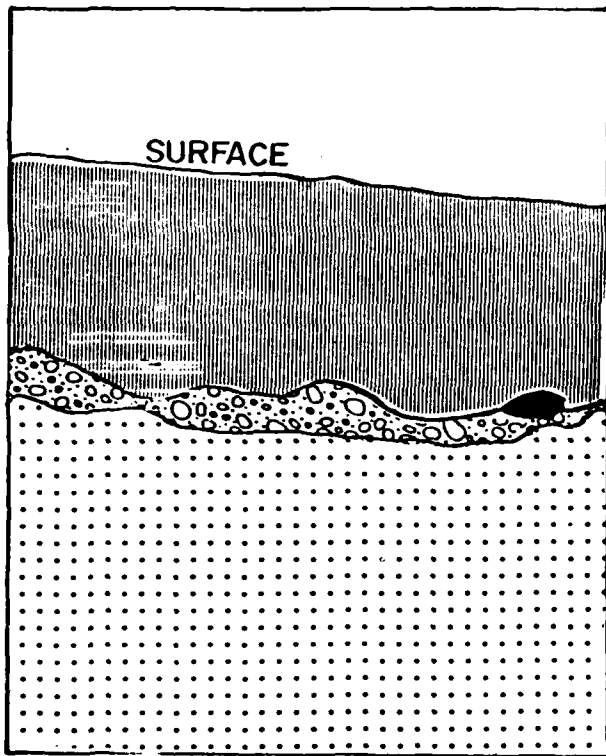
Controlled Surface Collection:

While conducting survey work in Navigation Pool 12, the surface collections indicated that 11 Jd 126 was an extensive site. To refine these boundaries, controlled surface collections were conducted along the levee and foreshore in 10 meter increments. While there were some gaps in the distribution of materials, for example, no surface finds were made immediately south of test pit 0-0, yet excavation confirmed that occupation did exist in that area, cultural materials were encountered in literally every 10 meter increment from the barge-cut on the northeast to the mouth of Crooked Slough on the southwest. The site does indeed span that entire distance so that its longitudinal axis extends approximately 330.0 m along Frentress Lake Slough.

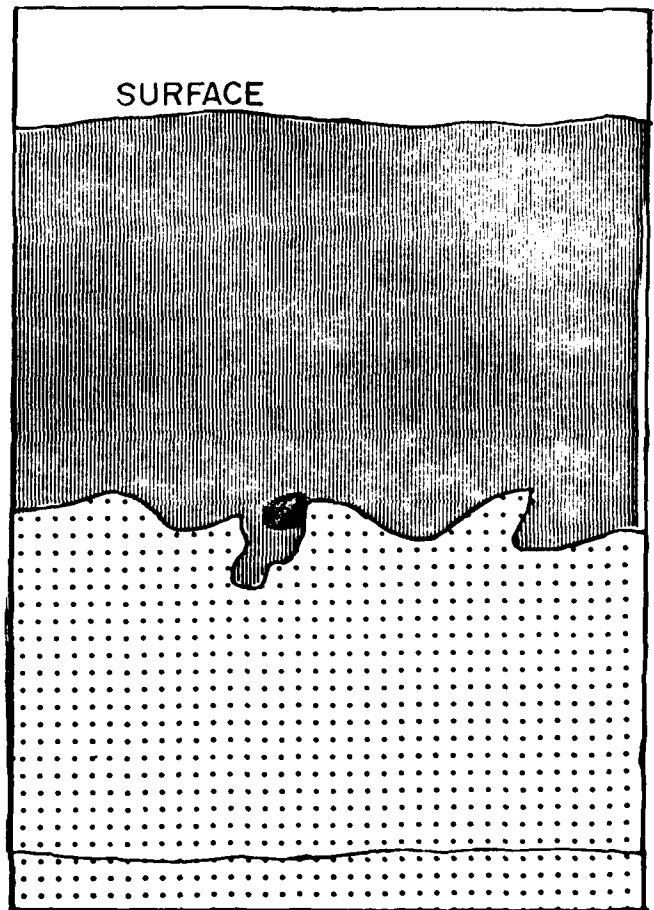
Soils-Geomorphology

Excavation at the barge-cut, conducted in 1982 resulted in the definition of the north-south profile of the main channel, sub-surface sandy formation. However, because of construction activities, the overlying silt mantle could not be accurately mapped (Boszhardt and Overstreet 1982: 46-48). To clarify the morphology of this topographic feature, eight soil profiles were cut and mapped along the generally east-west axis of the eroding levee. As noted, these soil profiles were spaced approximately 10 meters apart with the intent of clarifying the depth of silt deposited atop the underlying formation, and securing an accurate understanding of the configuration of the sandy deposit. Figure 36 depicts the north-south configuration of this landform and the locations of the features recovered from the barge cut in 1981. Figures 36-43 portray the soil profiles mapped along the erosional face of the Frentress Lake Slough levee and Figure 44 presents the extrapolation of the east-west configuration based on the soil profiles.

The underlying sandy formation slopes gently to the southwest and may represent an old point-bar. The obvious origin of this sandy sediment is the nearby Pleistocene terrace. It is possible that Thalweg 2, hypothesized by Dr. Anderson is responsible for deposition of the sandy material when the old channel was active. An additional



SOIL PROFILE 1



SOIL PROFILE 2

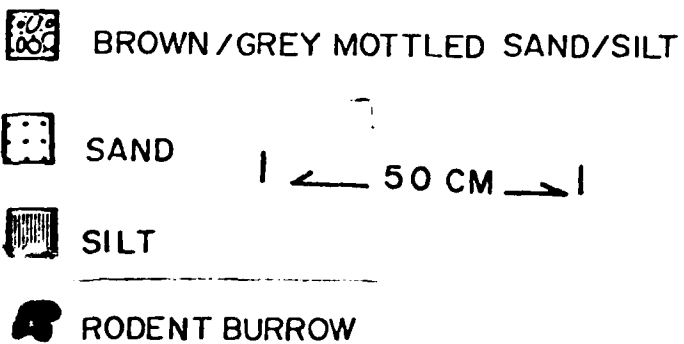
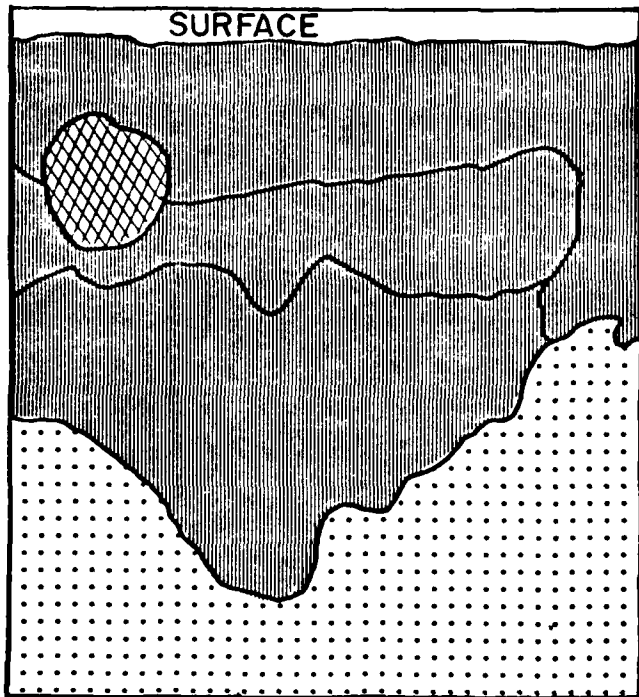
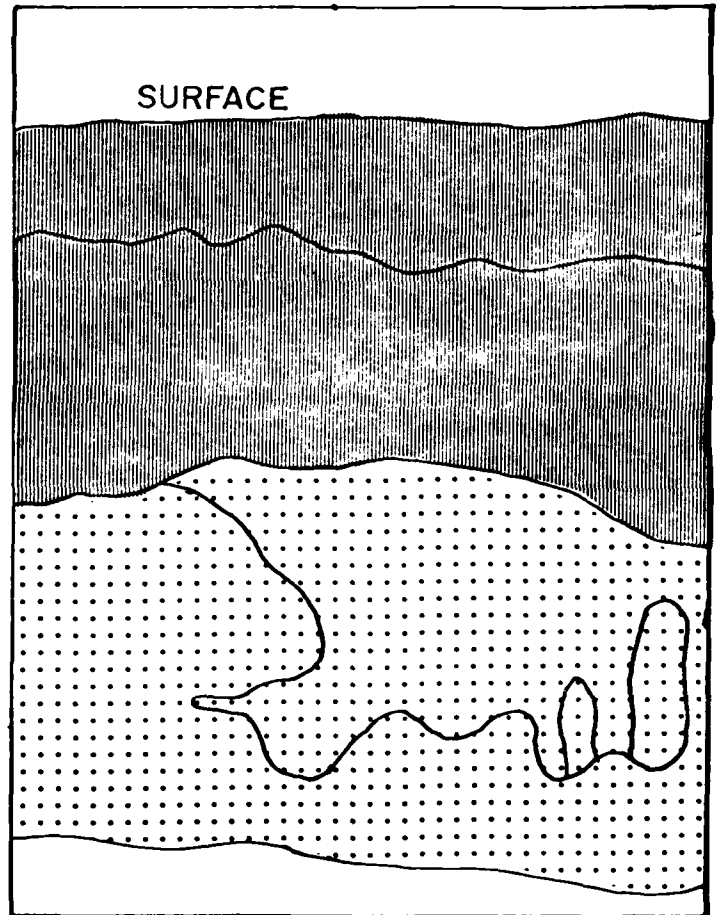
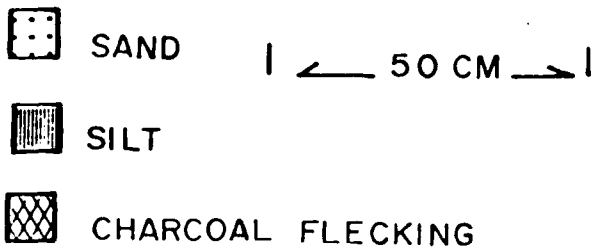


Figure 36: Soil Profile 1

Figure 37: Soil Profile 2



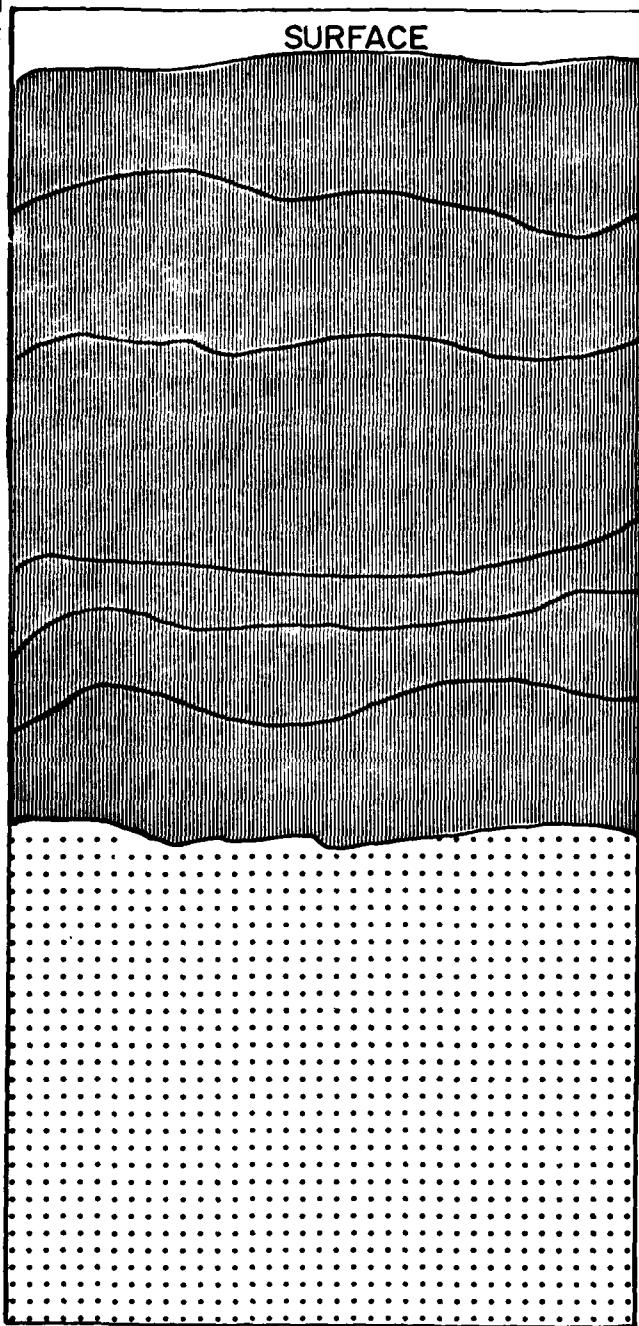
SOIL PROFILE 3



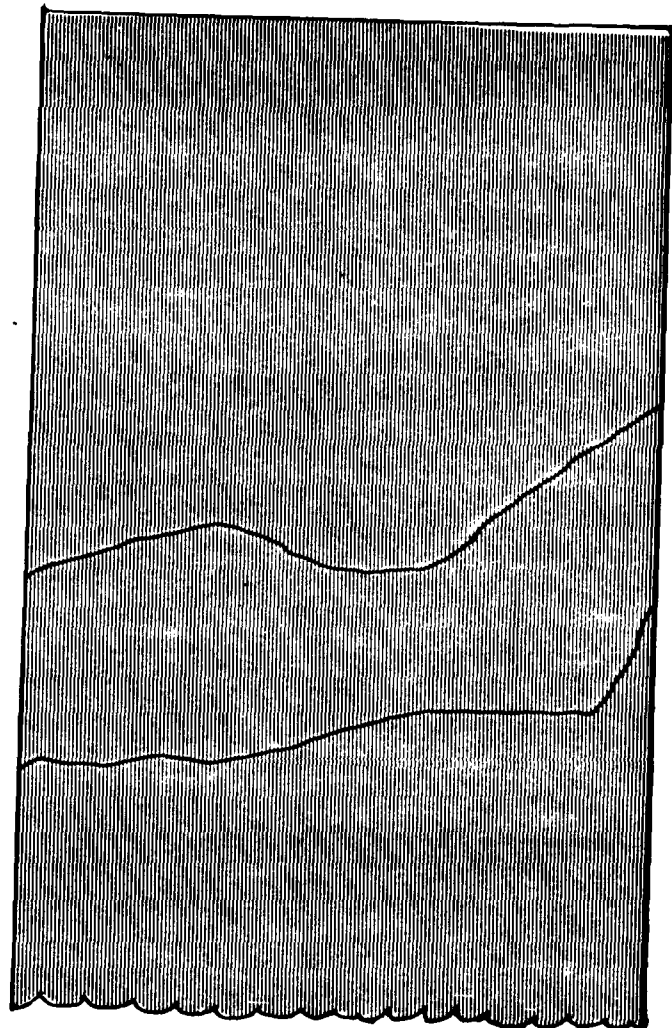
SOIL PROFILE 4

Figure 38: Soil Profile 3

Figure 39: Soil Profile 4



SOIL PROFILE 5



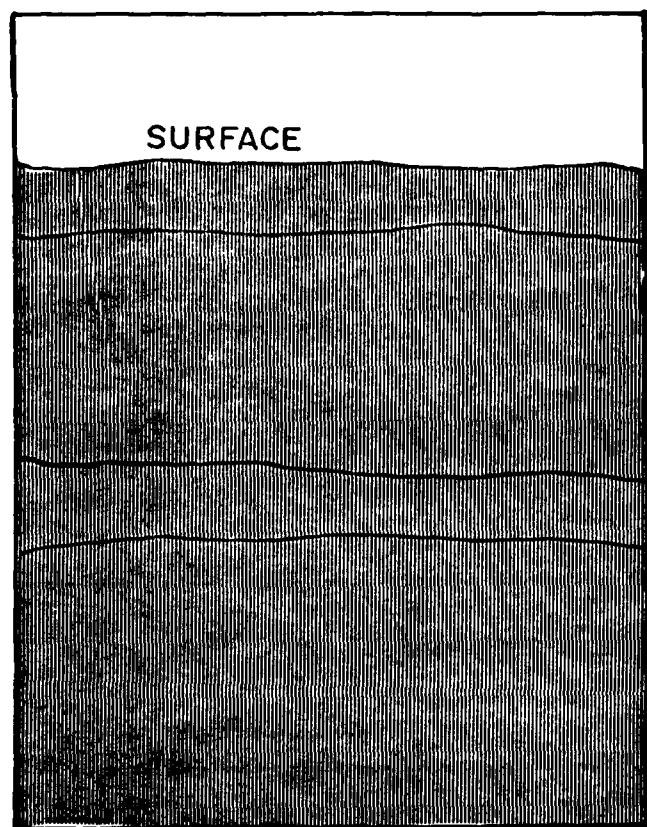
SOIL PROFILE 6

-  SAND
-  SILT

| 50 CM |

Figure 40: Soil Profile 5

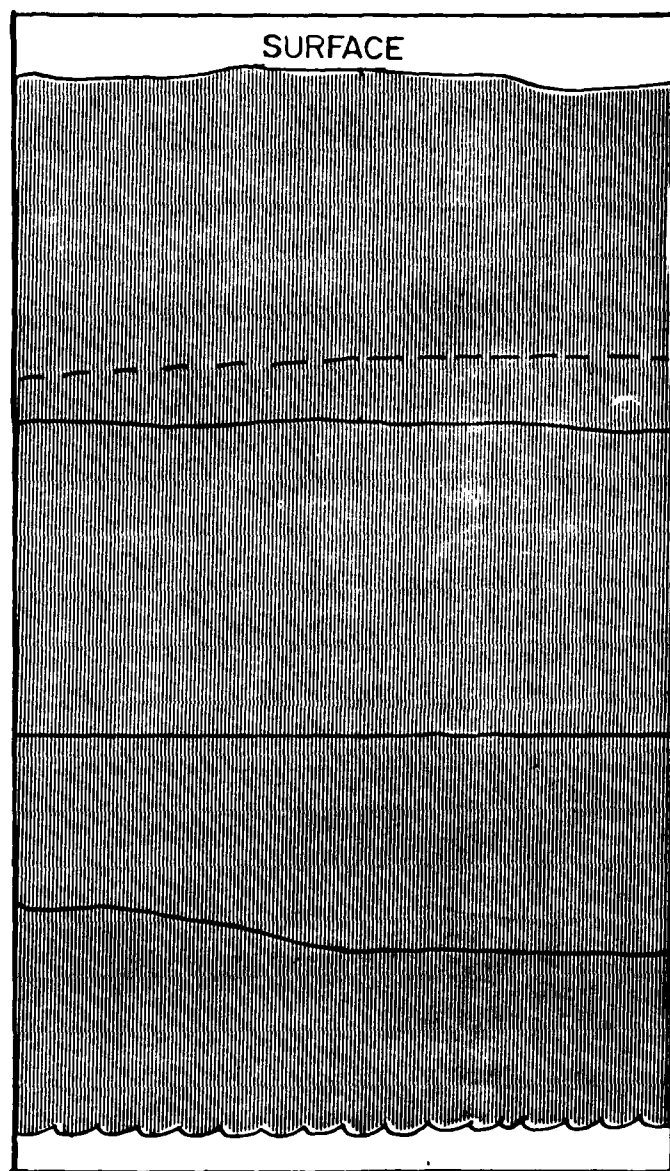
Figure 41: Soil Profile 6



SOIL PROFILE 8

| ← 50 CM → |

 SILT



SOIL PROFILE 7

Figure 42: Soil Profile 7

Figure 43: Soil Profile 8

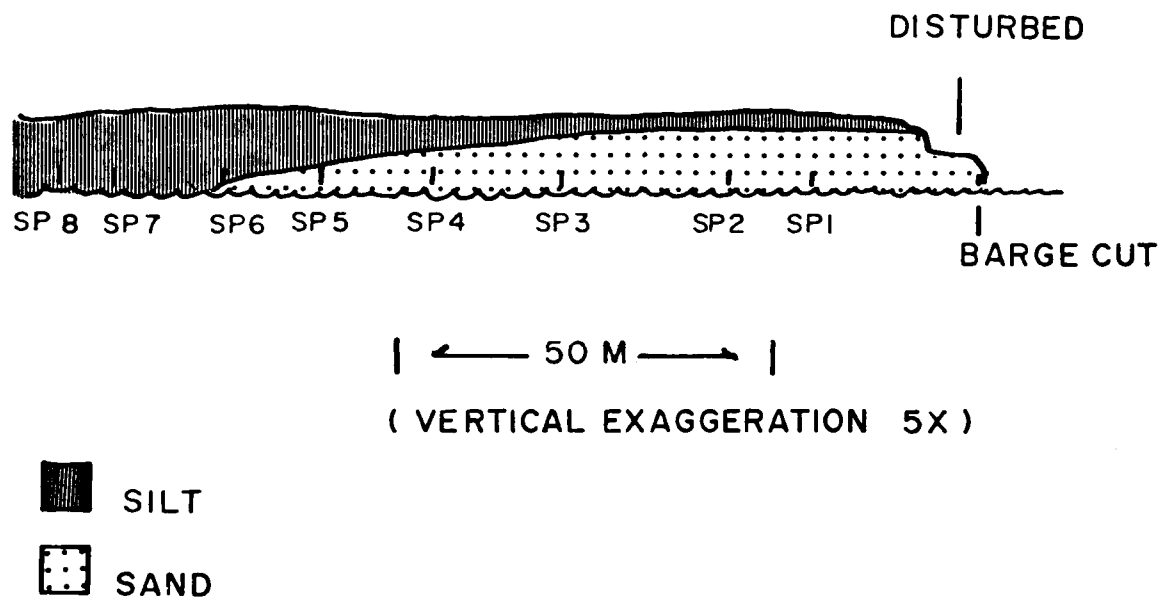


Figure 44: East-West configuration, main channel deposit.

interesting feature, however, is the formation of an old levee composed of the sandy alluvium. After the formation of this feature, hydrological changes took place, and finer grained sediments were deposited on the same feature. At the time of the Middle Woodland habitation at 11 Jd 126, this underlying feature must have been very thinly mantled by silts as the location of the Steuben point in level 7, 0-0 and the Middle Woodland features in the barge-cut serve to indicate.

In the overlying silt mantle, Late Woodland materials were recovered from very near surface on the levee crest to 70-80 cm below the surface on the backslope, indicative perhaps of increased sedimentation during Late Woodland times. Finally, the deposition of approximately 30-40 cm of silt at this locale since the late 1700's, the inferred date of the historic structure, provides an accurate measure of recent depositional history at 11 Jd 126. Taken together, prehistoric and historic occupations at Jd 126 present good opportunities for understanding rates from about 300 B.C. to the present.

At Dr. Anderson's direction, soil columns were collected at soil profile 8 and at the west wall of test pit 10N-0W to secure additional information regarding the nature of the silt sediments overlying the sandy sub-surface formation. Samples were bagged in 10 cm increments, air-dried and shipped to the geology laboratory at Augustana College for size and particle analysis. Results of Dr. Anderson's analyses are summarized in appendix B.

RESEARCH RESULTS-OCCUPATIONAL HISTORY OF 11 Jd 126:

Site 11 Jd 126 is immediately northwest of the Dubuque Sand and Gravel Company barge terminal easement. It is situated on the lowland floodplain of the Mississippi River, more specifically on the levee crest and backslope on the north side of Frentress Lake Slough. The northwestern boundary is the confluence of Crooked Slough and Frentress Lake Slough. The northern boundary can be defined by the old channel scars of Crooked Slough.

Early Woodland Components:

No additional information relating to Early Woodland occupations were recovered during the intensive survey. During the 1981 investigations, a single base of a straight stemmed projectile point was tentatively identified as related to the Kramer/Liverpool types (Boszhardt and Overstreet 1982: 87). In spite of this, no additional related forms were found, and no examples of Marion Thick or related wares are noted for the ceramic assemblage.

Also notably absent are any examples of incised-over-cordmarked ceramics, finger nail impressed ceramics, or combinations of the two which would be indicative of Early to Middle Woodland transition at 11 Jd 126. A base of a contracting stem projectile point or knife, known locally as Waubesa Contracting Stemmed or Dixon Broad Blade (see Baerreis 1953: 155, Hurley 1975: 267, White 1968: 64-65), was recovered from 11 Jd 126 (see Figure 46: B).

Based on the current investigations at the site, it would appear that data relevant to understanding local Early-Middle Woodland transition are not substantial. Benn (1976, 1978, 1979) would classify such components within the Ryan Complex. He explains the relative scarcity of materials associated with this complex with reference to several factors:

It is a matter of speculation that Early Woodland populations were relatively low in comparison to the subsequent period of Havana culture. This is inferred from the usually scant collections of Early Woodland pottery which always comprise a fraction of a percentage in large ceramic collections from habitation areas. It is also possible that the transition from Archaic to Early Woodland occurred only shortly before the advent of the Havana Tradition in northeast Iowa, and the paucity of evidence may be attributed to the brief existence of Early Woodland culture. Still another factor which contributes to the obscurity of Early Woodland culture is that subsequent Havana, Allamakee, and Effigy Mounds cultures deposited such a large quantity of remains that this earliest Woodland complex was literally buried or so diffused throughout mixed deposits that it is virtually invisible. This last statement, however, assumes that Woodland cultures for the most part occupied many of the same living sites and utilized the same landforms for mound constructions. There is evidence that this assumption is at least partially correct (Benn 1979: 53).

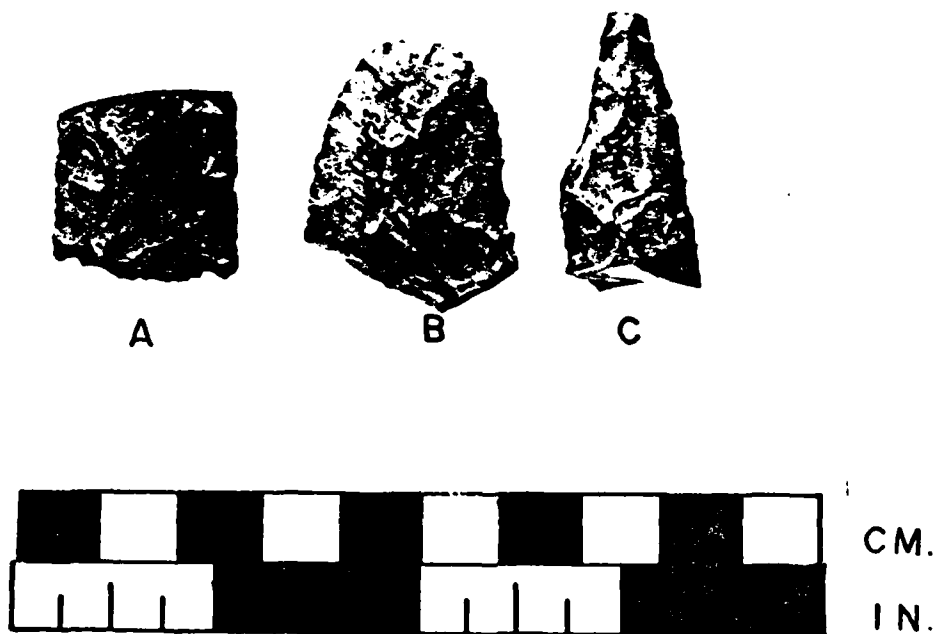


Figure 45: Bifacial implements, 11 Jd 126, A-corner notched (?) implement, B-contracting stemmed implement, C-drill.



Figure 46: Broken bifaces from 11 Jd 126.

Ceramics assignable to the Ryan Complex certainly are not invisible on the lowland floodplain of Pool 12. Several sites yielded incised-over-cordmarked and finger nail incised ceramics (Boszhardt and Overstreet 1982). The margins of navigation pool 10 have produced a significant number of sites that could be assigned to the Ryan Complex (Boszhardt 1982, Stoltman, Theler, and Boszhardt 1981, Theler, n.d.). At this locality, Stoltman, Theler, and Boszhardt (1981) have defined the Prairie Phase (1981), primarily from shell midden contexts on the lowland floodplain. Theler's report (n.d.) notes the intimate association of Prairie Phase materials and shell middens (see also Van Dyke, Overstreet and Theler 1980). The present settlement subsistence model presented by Theler for Prairie Phase populations for the lowland floodplain habitat, between the years A.D. 1-500, focuses on short-term extraction and processing camps wherein mussel procurement is the primary activity. This would serve, if the interpretation is correct, as a possible explanation of the limited Prairie Phase/Ryan Complex materials at 11 Jd 126. Such remains are to be expected intimately associated with shell middens or beds in a limited configuration. As construction activities have already destroyed the shell midden at 11 Jd 126, we may never be able to secure additional information regarding Early-Middle Woodland transition at the site. On the other hand, the site is extensive, and is possible that additional shell middens and associated Prairie Phase/Ryan Complex remains are buried on old land surfaces at 11 Jd 126.

McGregor/Trempealeau Phase:

Two interpretive frameworks within which Middle Woodland materials recovered from surface and sub-surface contexts at 11 Jd 126 can be discussed have previously been defined. The first of these, the McGregor Phase, has been defined by Benn (1978, 1979). The other, The Trempealeau Phase has been defined by Stoltman (1979). Both of these frameworks share the common theme of Hopewell and Havana influence, and predictably, as much of the extant data are derived from mortuary practices, both are heavily laden with interpretations of burial practices. Benn, elaborating on Logan's earlier work (1976) summarizes the salient features of the McGregor Phase:

The McGregor Phase (Logan 1959: 286) has been named for the local manifestation of the Havana Tradition in northeast Iowa. That the McGregor Phase (ca. 0 AD/BC to AD 300) belongs within the Havana Tradition has been demonstrated in a detailed ceramic analysis (Benn 1978), the essence of which can only be summarized here. McGregor Havana Ware pottery incorporates most of the

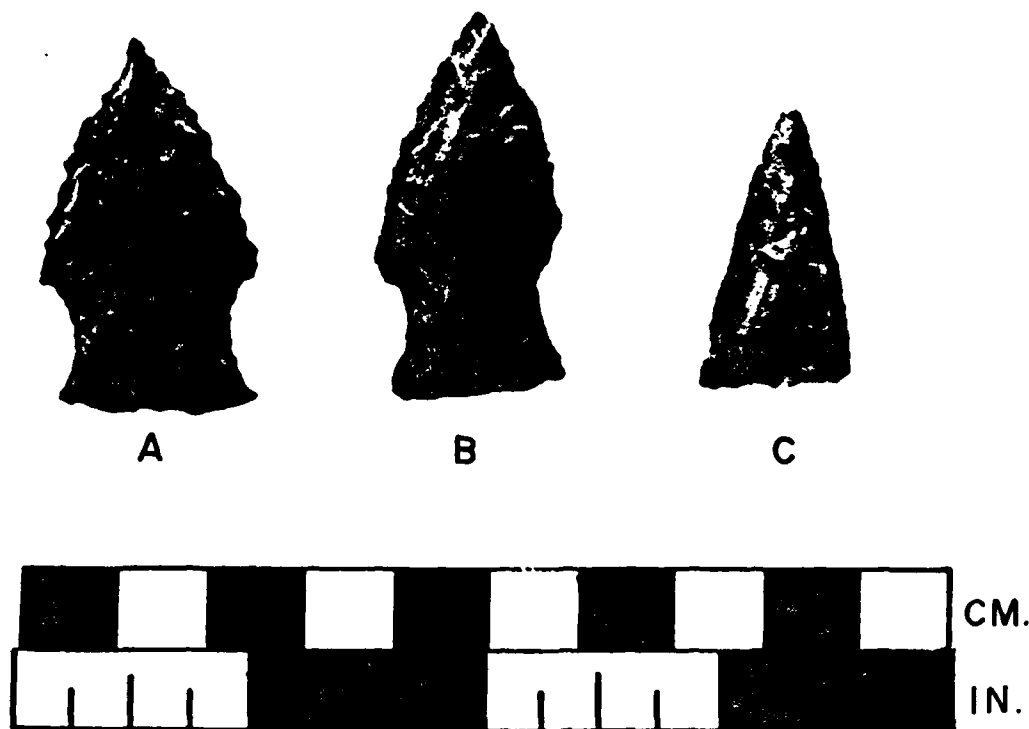


Figure 47: Projectile points, 11 Jd 126, A-B, Stueben, C, Late Woodland Triangular.

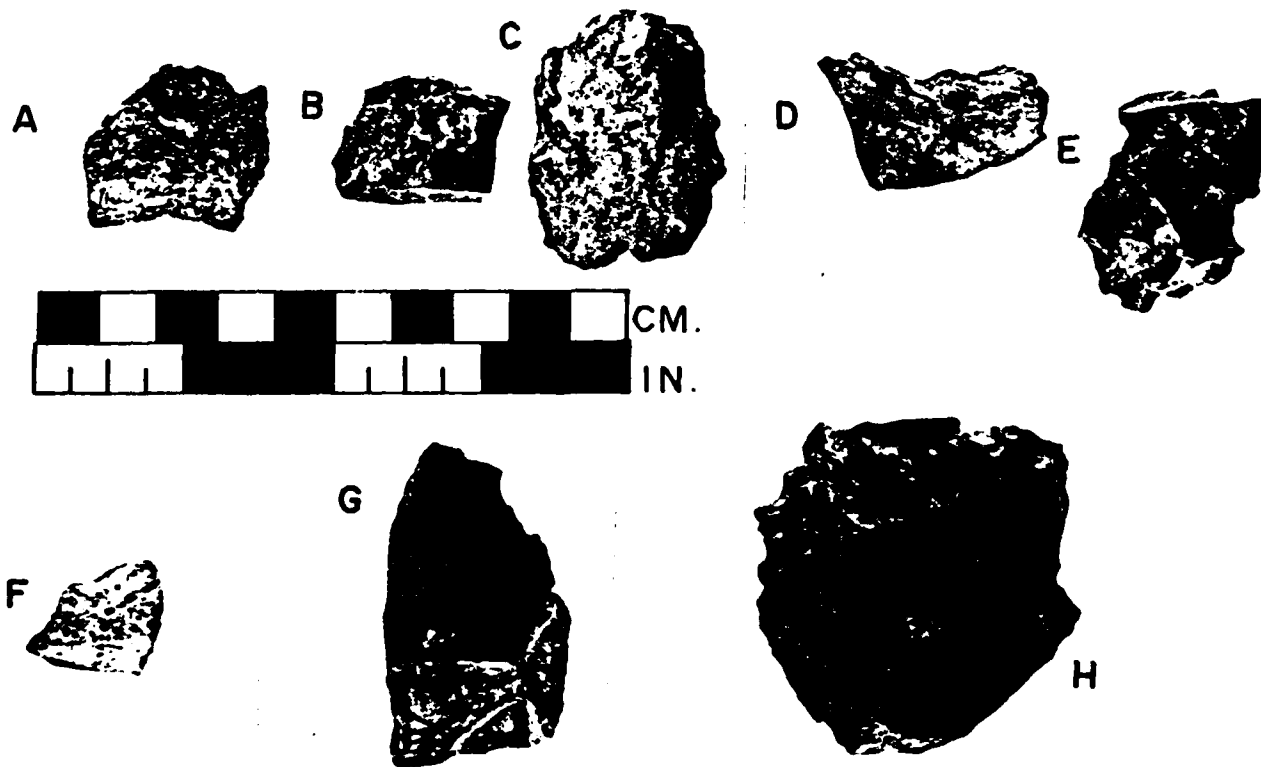


Figure 48: Lithic detritus, 11 Jd 126, A-B, D-G, core reduction flakes, D, H, primary decortation flakes from chert cobbles.

Illinois types defined by Griffin (1952) and described by Loy (1968), except that the curved-dentate stamped types are relatively uncommon in Iowa. Hopewell Ware is also very rare in Iowa. The Naples Dentate Stamped type comprises the majority of decorated sherds in most collections. Other common Illinois Havana traits, such as projectile point forms and the characteristically large habitation areas in the Mississippi River Valley, are also present in northeast Iowa (1979: 55).

Regarding Hopewell affiliations or influences on the McGregor Phase, Benn states:

Hopewell manifestations also have been identified as part of the McGregor Phase (Logan 1959: 286-309). As defined by Logan, the aspects of the McGregor Phase Hopewell are confined to a variable array of relatively humble (compared with Illinois models) mortuary structures which are contained in conical earthen mounds. Three general types of burial constructions were defined by Logan: 1) central rectangular pits; 2) rock alignments or enclosures; and 3) cremations with mucky clay deposits. Typical Hopewellian grave goods were found only with the first two classes of structures, and the third class was considered to contain more heterogeneous types of constructions. Logan placed McGregor Phase Hopewell slightly later than the "classic" Hopewell of the Illinois River Valley, or during the latter half of the Ogden and Bedford Phases and during the subsequent Pike and Steuben Phases in terms of the current chronology (Griffin et al 1970) (1979: 55).

In his recent discussion of Middle Woodland Stage communities of southwestern Wisconsin (applications to northwest Illinois and northeast Iowa are made explicit in the commentary), Stoltman has proposed that two middle Woodland Phases can be recognized for the locality (1979: 122-139). Roughly equivalent to Benn's McGregor Phase, Stoltman classifies manifestations with Havana-related ceramics in the Trempealeau Phase. Of this he notes:

...I propose that two Middle Woodland phases can be recognized in southwestern Wisconsin. The earlier, the Trempealeau Phase, is characterized by the predominance of Havana-related pottery, and the younger, the Millville Phase, saw the ascendancy of the Linn ceramic series. Commonly associated with the Linn Series, always in minor amounts, is the Lane Farm series (see Table 18.4). The two basic types within this series are Lane Farm Cord-Imprinted and Lane Farm Stamped

(Logan 1976: 99-100). The paste qualities of the Lane Farm types are indistinguishable (to me, at least), from the Linn series and could easily be included within it; however, Logan (1976: 109) chose to exclude them, probably because Lane Farm Cord-Impressed in particular is believed to bridge the gap between Middle Woodland types and Madison Cord-Impressed. All factors considered, Lane Farm Cord-Impressed does indeed appear to fill the bill as an ancestor of Madison Cord-Impressed. There are notable differences between the two types, such as smoothed to polished rather than corded surfaces beneath the cord-impressions, rocker stamping on the body, and the virtual absence of interior cord-impressions on Lane Farm Cord-Impressed, but the similarity of many of the exterior cord-impressed designs is evident (1979: 137-138).

Regarding the reconstruction of life-ways of the inhabitants of Middle Woodland stage communities in southwestern Wisconsin (again applicability to the northeast Iowa and northwest Illinois localities is clear), Stoltman notes:

Information on the daily lives of the Middle Woodland peoples of Southwestern Wisconsin is meager. While much is known about burial and artifact typology, few data are available on such subjects as community structure, settlement patterns, paleoecology, subsistence, seasonality, or population size and density (1979: 130).

Upon an exhaustive review of the scanty evidence from regional sites relative to reconstruction of subsistence and settlement, he concludes:

These faunal data are too meager to be anything more than suggestive. The paramount importance of deer to the Middle Woodland inhabitants of southwestern Wisconsin is obvious and not surprising. How important, especially seasonally, small mammals, fish, shellfish, and birds were to these same peoples remains unknown. Since Millville, Stonfield, and Preston demonstrate that a wide diversity of game species were exploited by Middle Woodland peoples, it seems reasonable to assume that subsistence pursuits would have displayed pronounced seasonal patterns to conform to the fluctuating availability of smaller game to maximize yields during periods of optimal availability, while deer served as a reliable staple and/or backup during all seasons. In evaluating these faunal data, an especially

critical deficiency in the current data base cannot be overlooked: there are simply no data available on Middle Woodland plant utilization, whether domesticated or wild, for southwestern Wisconsin. We have no positive evidence of cultigens among these societies, but this is saying little since the systematic collection and analysis of soil samples for plant remains has not been attempted (1979: 133-134).

While variations exist between the models presented by Benn and Stoltman, one common theme is the hypothesized short duration of the era of Havana/Hopewell influence. Benn places the McGregor Phase between 0 AD/BC and A.D. 300, while Stoltman suggests temporal parameters of 100 B.C. to A.D. 200-300.

Cultural materials recovered from 11 Jd 126 clearly place one of the components assignable to Middle Woodland within this time span. As well, both Hopewell and Havana-related ceramics were encountered in the excavations. Figures 49 and 50 provide examples of ceramics that may be accommodated within types associated with the McGregor/Trempealeau Phase constructs. Feature 2, for example (Boszhardt and Overstreet 1982: 60-69) yielded zoned, dentate stamped and rocker stamped sherds (Figure 50, B & D). Other Havana-like materials were recovered from Feature 7 (see Figure 50, B-F). It is always troublesome to apply assignment to typologies from small samples. However, there is little doubt that some of the zoned-stamped sherds can be placed within the types Hopewell Zoned Stamped, variety dentate stamped (Griffin 1952: 116), Naples Stamped, variety plain rocker. Paste characteristics, for example, limestone and grog temper, suggest non-local manufacture.

Stoltman has previously addressed this issue, while at the same time, Benn has cited the rarity of "Hopewell" ceramics in Iowa (1979: 55):

Ever since McKern first recognized the Hopewellian affinities of pottery recovered in the Trempealeau locality, it has been customary to look to the south, especially in Illinois, for the inspiration of Middle Woodland ceramics in southwestern Wisconsin. The reports of Thomas (1894: 83) and McKern (1931a: Pls. 45-47) indicate that true Hopewell series ceramics do indeed occur in southwestern Wisconsin. In fact, so specific are the similarities of these vessels to Illinois types, including the presence of limestone temper, which is otherwise extremely rare in Wisconsin, that one is inclined to consider many to be direct imports from Illinois (1979: 135).

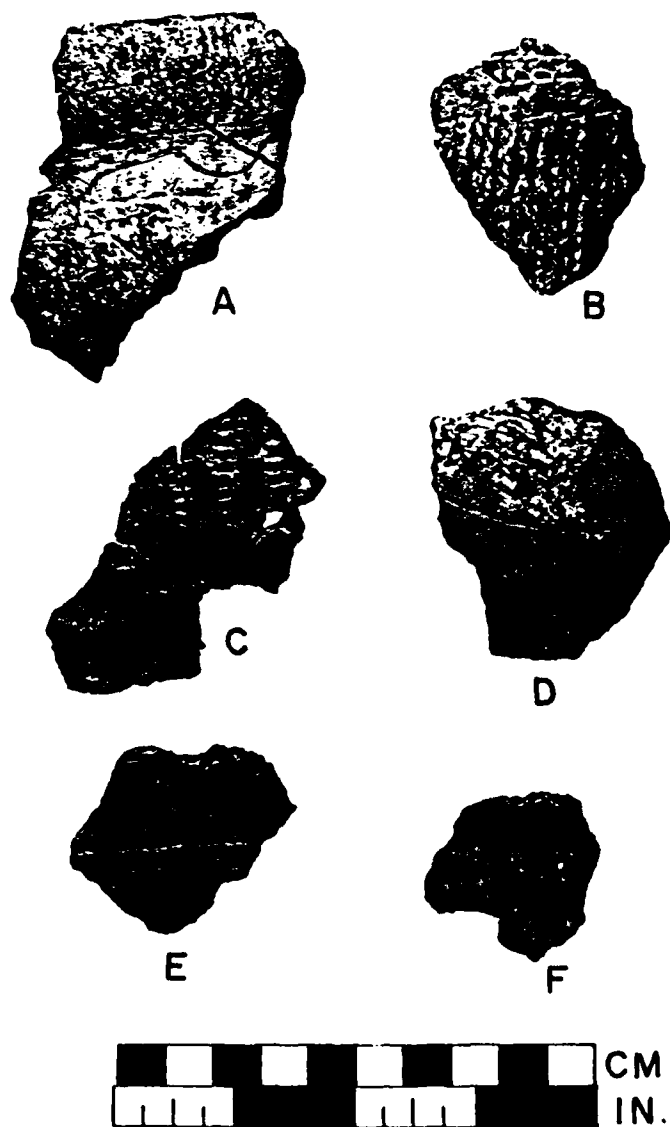


Figure 49: Middle Woodland ceramics, 11 Jd 126.



Figure 50: Middle Woodland ceramics, 11 Jd 126.

Perhaps of greater importance at 11 Jd 126, is the occurrence of ceramics associated with Hopewell, Havana-related types (e.g., Fig. 49, A, E, F) representing local developments. The utilization of sloppily applied dentate stamps on cordmarked surfaces, sans zones, and the use of smoothed zones, which have been decorated by trailed or incised lines (in this case on a vessel with mild interior rim channeling) are likely to be more significant elements of local ceramic assemblages. This of course cannot be adequately evaluated until larger, controlled samples have been secured from lowland floodplain Trempealeau/McGregor Phase components.

Of additional importance is the recovery of carbonized plant remains, and, fresh water mussels from Trempealeau/McGregor Phase contexts. The samples are woefully small, yet provocative. Fresh water mussel procurement has, until this time, not been associated with Trempealeau/McGregor Phase populations (personal communication, J. Stoltman, J. Theler). Feature 2 (Boszhardt and Overstreet 1982: 113) and Feature 7, both interpreted as McGregor/Trempealeau Phase, produced remains of nutshells, chenopodium (charred), cherry pits (Prunus sp.), and carbonized wood. These data, while quite limited, do nothing to detract from Benn's characterization: "The entire Quad-State region offered a plethora of alternatives for the hunting and collecting Havana Peoples. In the face of abundance and a sparsely populated frontier, McGregor Phase peoples neither established a copy of the Havana Tradition nor perpetuated their style of Havana culture for more than about two centuries (1979: 59).

The results of evaluations at 11 Jd 126 also provide an interesting contrast between adaptive strategies employed by Prairie Phase populations where components are inferred to represent short-term extraction and processing camps focused on fresh water mussels (Theler n.d.). McGregor/Trempealeau Phase components, if 11 Jd 126 is representative, reflects wider ranging activities, i.e., construction of storage pits, collection of plant foods, in addition to utilization of the rich shell beds.

Allamakee/Millville Phase:

Subsequent Middle Woodland Habitation sites have been assigned to either the Allamakee or Millville Phases. Benn has defined the Allamakee Phase from the perspective of ceramics:

The transformation from the McGregor Phase to Allamakee Phase culture is best documented by ceramics. Linn Ware (Logan 1959: 206), the Allamakee Phase pottery, evidences a substantial

departure from Havana ware and the development of a unique regional style of ceramics (Benn 1978). In brief, the earliest Linn Ware types, Levsen Dentate Stamped, and Cord-wrapped-Stick stamped, contain emphasis on hard, thin vessel walls with smooth, uniform surfaces, round or squared lips lacking any bevel, the use of punctates but the absence of nodes (bosses), and decorative stamps occurring in multiple horizontal belts of diagonal and vertical elements or geometric designs. Although it is obvious that Levsen types have evolved out of Havana types, the bold stamps executed in prolific zones with accessory incised lines, nodes, and beveled lips so typical of Havana ceramics were generally dropped from Levsen types in favor of more subdued decorative styles. Linn Ware also incorporates undecorated plain and cord roughened types, Spring Hollow Plain and cordmarked, which are analagous to the post-Havana Weaver types (Griffin 1952). Probably the most interesting Linn Ware type is Lane Farm Cord Impressed (Logan 1953, 1959: 171), a type which seems to have appeared after the Allamakee Phase was underway. Of central importance is the Lane Farm rim decoration consisting of single cord or fabric impressions, which is apparently the harbinger of fabric decorated pottery of the Late Woodland period in the Upper Midwest (cf. Benn 1978). Lane Farm Cord Impressed shares carefully smoothed surfaces and the absence of lip bevels with other Linn Ware types, but the Lane Farm type has multiple rows of rocker dentate stamping over smooth exterior surfaces. Apparently, rocker stamp roughening is a substitute for body cord roughening which occurs on other Linn Ware types (1979: 60).

From the southwestern Wisconsin locality, Stoltman has defined the Millville Phase (1979) that obviously shares many similarities with Benn's Allamakee Phase. Both Stoltman and Benn draw heavily from data secured by Freeman from the Millville Site (1969), which serves as the type station for Stoltman's Millville Phase and is recognized by Benn as the single component from which Millville/Allamakee faunal remains have been reported.

Millville/Allamakee ceramics and projectile points are reported from 11 Jd 126 (Boszhardt and Overstreet 1982) and additional examples were recovered in these most recent investigations. Figure 47 (A & B) depicts the Steuben points recovered from 11 Jd 126 and their assignment to Millville/Allamakee should cause no consternation. Ceramics include those portrayed in Figure 49-C, and, Figure 50-A. Based on paste characteristics as well as decorative motif,

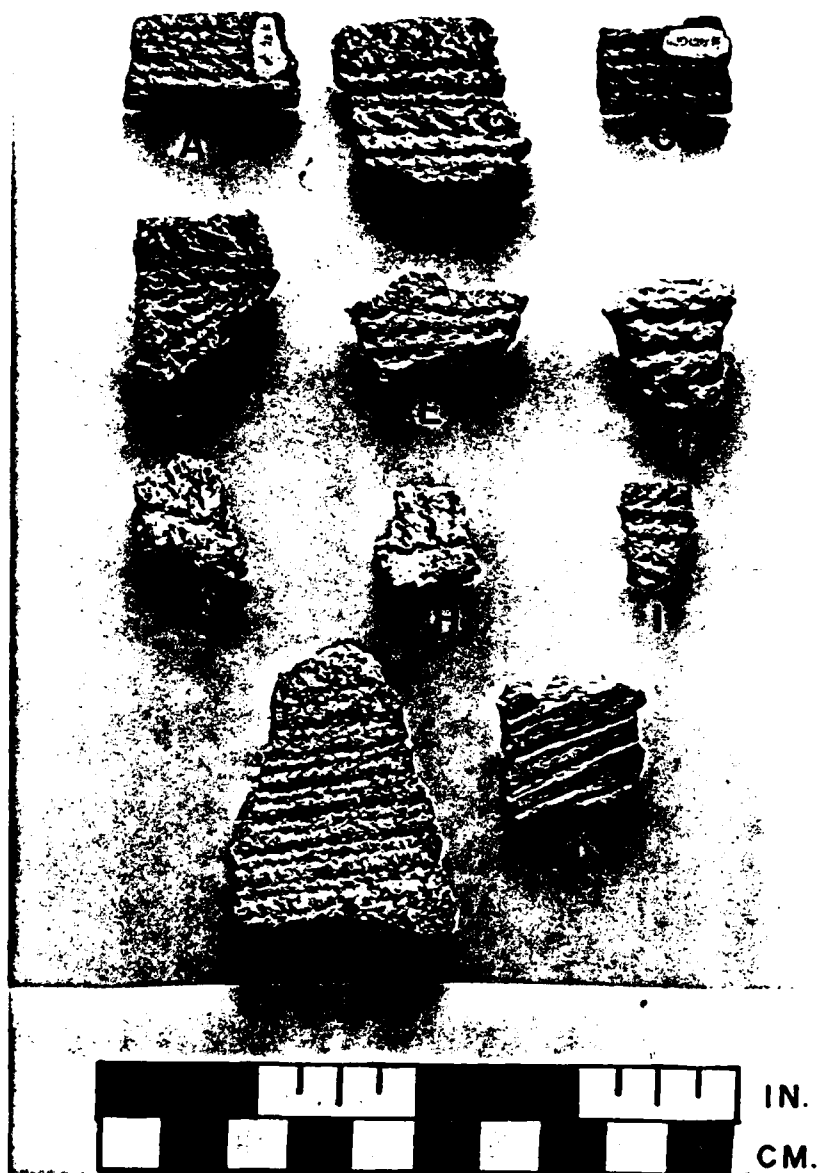


Figure 51: Cord-Impressed ceramics, 11 Jd 126.

these sherds can be accommodated within the Levsen Stamped, variety cord-wrapped stick defined by Logan (1976: 93-94). Figure 51 includes examples of ceramic sherds with cord impressions applied to smoothed surfaces and likely represent Lane Farm Cord-Imprinted (Fig. 51, G, H, and K). Based on the compact paste and thin-walled vessel, the vessel represented in Figure 49-A may be more closely affiliated with Linn Ware than ceramics in the Havana series.

It is unlikely that the subsistence and settlement strategies of Allamakee/Milleville populations varied greatly from those of the earlier Trempealeau/McGregor Phase. Our samples are too restricted to elaborate on Benn's hypothetical pattern of maintaining summer villages in the Mississippi Valley with the dispersal of smaller bands into the interior during more inhospitable times of the year (1979: 61). This model suffers from a lack of any substantive empirical data, a phenomenon readily admitted by Benn, and one which the archaeological deposits at 11 Jd 126 provide opportunities for resolving.

The silty overburden at 11 Jd 126 makes it difficult to segregate Allamakee/Milleville deposits from earlier Trempealeau/McGregor habitation. However, more extensive excavation may well result in the definition of buried features from later Middle Woodland contexts.

Late Woodland occupation

Late Woodland prehistory is not as well documented in the Central Illinois River Valley as the Middle Woodland manifestations, however, a substantial data base exists and ceramics have been referred to as Tampico, Maples Mills, and Canton wares (Fowler 1952: 138). Maples Mills seems to have assumed primacy and has been described and discussed by various investigators (e.g., Cole and Deuel 1937, Schoenbeck 1946, Wray 1952, Logan 1976, Green 1976, Benn 1980, and Riggle 1981). As one of its diagnostic elements, Maples Mills shares with many regional Late Woodland Complexes or cultures the attribute of cord-impressed ceramics. However, the vessels are often distinct from other Late Woodland ceramics in having squared vessel orifice, castellated rims, and exterior lug handles. Green, in a recent summary of radiocarbon dated contexts has placed Maples Mills between the years A.D. 1000 and 1230 (1976: 179-183). Riggle (1981) has extended the temporal boundaries with the hypothesis that Maples Mills may have developed locally in western Illinois beginning as early as A.D. 700. Maples Mills ceramics are identified at several localities from Bennett's (and Nickerson's) investigations in Jo Daviess County.

Benn has recently defined the Late Woodland Keyes Phase from the northeast Iowa locality (1976) and considers this

phase as the comprehensive designation for the Effigy Mound culture in the region. Notably absent from Benn's summary of the Keyes Phase is any mention of Maples Mills ceramics.

He notes:

Madison ware ceramics are the most prolific artifact of Keyes Phase culture. In Iowa, Madison Fabric Impressed comprises 80% or more of all Madison ware, with Madison Plain accounting for nearly all the remaining portion. Occasionally, rare types such as Madison Punctated and collared varieties are also evidenced. The Keyes Phase pottery differs from its counterpart in Wisconsin, for Wisconsin Madison Ware includes a substantial percentage of collared types (Hurley 1975) (1979: 66).

At 11 Jd 126, both Maples Mills and Madison Cord Impressed occur in pit features and in sheet midden contexts. At this juncture one can do little but note their occurrence, the relationships, stratigraphically and chronologically await clarification based on larger samples. Figure 51 provides examples of cord-impressed ceramics (E is interpreted as Maples Mills), and Figure 52 provides an obverse-reverse view of a section of a probable Madison Cord-Impressed vessel. The small triangular projectile point depicted in Figure 47-C is also associated with Late Woodland occupation at 11 Jd 126.

No collared wares were recovered from excavation at 11 Jd 126, however, construction activities at the barge terminal (borrowing of sand from an already active sand pit fostered additional emergency salvage at 11 Jd 115. Recovery of slumping pit at 11 Jd 115, reported during survey investigations in navigation Pool 12 (Boszhardt and Overstreet 1982), yielded collared wares, an example of which is depicted in Figure 53. Situated immediately north of 11 Jd 126, the discovery of collared ceramics (Starved Rock Collared) from Jd 115 suggests that their occurrence at 126 is not outside the realm of possibility.

Late Woodland occupation and utilization at 11 Jd 126 is expansive and complex occurring in the form of pits and sheet midden. As well, Late Woodland ceramic and other diagnostics were found along the entire erosional face of the Frentress Slough levee for a distance of about 300 meters.

Benn has noted the existence of a Keyes Phase horticultural and plant collecting complex incorporating maize, sunflower, and chenopodium recovered from Hadfields Cave as elements of that complex (1979). At 11 Jd 126, a single Late Woodland pit feature has been identified and its contents analyzed (see Boszhardt and Overstreet 1982: 113).

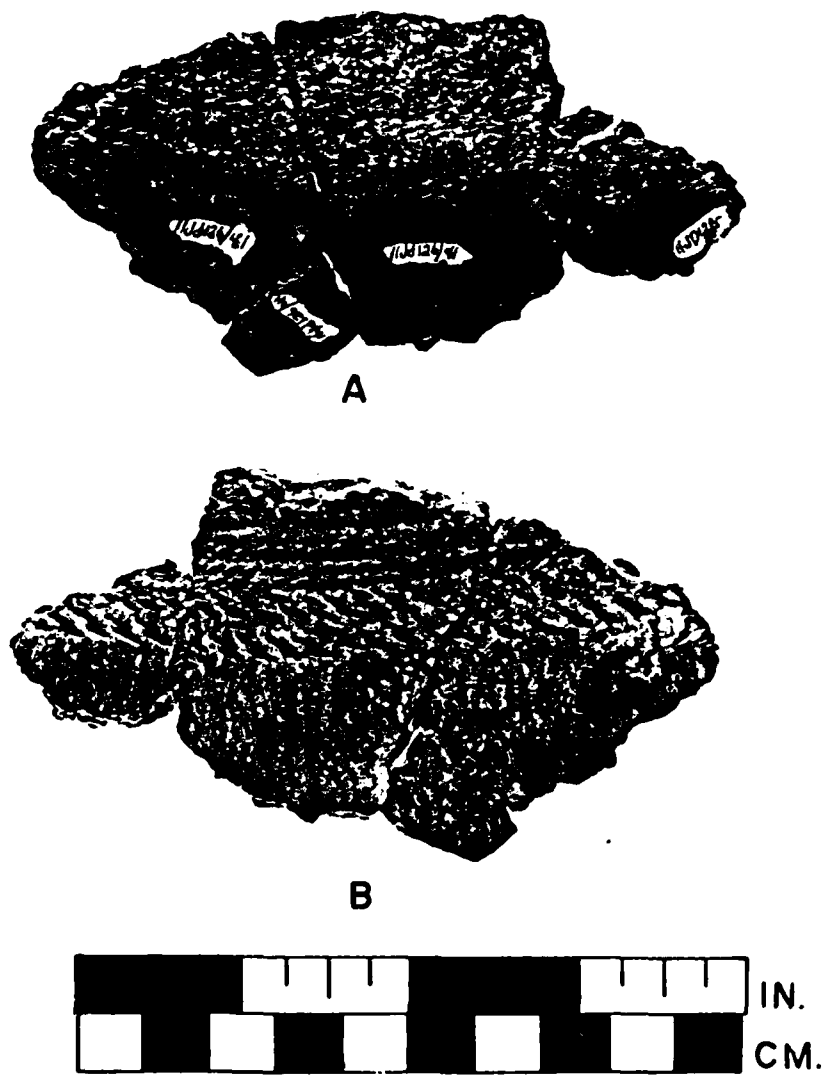


Figure 52: Madison Cord-Impressed vessel fragment, 11 Jd 126,
A, reverse, B, obverse



Figure 53: Starved Rock Collared vessel, 11 Jd 115.

The chenopodium is statistically insignificant, a few seem always to be recovered from flotation samples, but nut fragments from the feature are not inconsistent with Benn's model of Late Woodland subsistence procurement in the region. No corn was recovered from any prehistoric contexts at 11 Jd 126.

Whether or not the Late Woodland occupation(s) at 11 Jd 126 will be comfortable in the nomenclature of the northeast Iowa locality (Keyes Phase) can ultimately be resolved only by more extensive investigation at the site. The influence/relationship/chronological fit with Maples Mills are additional questions that can be addressed from undisturbed contexts undoubtedly buried under recent silt deposits at 11 Jd 126. Finally, affinities with Effigy Mound Tradition sites in the southwestern Wisconsin locality, are equally significant. Continuing investigations of the floodplain in that region by the University of Wisconsin-Madison will likely yield tangible data for comparing and contrasting the behaviors manifest at 11 Jd 126 with those of the former locality.

Historic period occupations

By latter decades of the 18th century, the French had become aware of the mineral resources, notably lead, in the Upper Mississippi Valley. During this period both Perrot and LeSueur had conducted mining in the area (Thwaites 1895: 273-274). Julian Dubuque was firmly established, having secured the right to mine the lead deposits on the Iowa side of the river from the resident Fox bands in 1788 (Walthall 1981: 19). By the 1830's, Featherstonhaugh describes the region as marked by numerous "diggings" inhabited by unsavory types (1970).

Thus, during the latter years of the 18th century and the early years of the 19th, Euro-Americans were attracted to the region for commercial pursuits of both mining and the fur-trade. The remains of this historic structure excavated at the erosional face of the Frenress Lake Slough levee, based on the data recovered, cannot unequivocally be associated with either commercial interest.

The artifact assemblage is a meager one, consisting for the most part of items that were lost or discarded prior to the abandonment of the building. Missing, unfortunately, are the items that would definitely tie the occupation to fur trade activities, e.g., bale seals, tokens, or trade goods of a diagnostic nature, or, lead extraction and processing, e.g., clinkers, waste, ash. Nonetheless, the occupation is tentatively interpreted as dating to the late 18th century, and seems, in total, to represent domestic rather than commercial activities. Brief descriptions of the materials will aid in the assessment of this interpretation.

Gunflints: A total of 8 gunflints were recovered from in and around the structure. Many of them have been badly burned in the firing of the house and have been shattered from the intense heat. Figures 54 and 55 illustrate the gunflints, three of which are clearly spall types, two clearly platform or blade types, the remaining three are quite irregular and it is not possible to classify them as spall or platform types. Notably, the two platform specimens (Fig. 54 F-G) appear to have been used as strike-a-light flints where the spall forms have not. No attempt is made here to identify the gun flints as British, French, or Dutch owing to problems in that classificatory framework as well as the small sample.

Glass: Two soda-lime glass sherds, likely from a case bottle manufactured in the United States between the years 1770 to 1810 were recovered. Most utilitarian wares shipped from Europe were heavier items and glass batches had sizeable quantities of impurities, resulting in dark color such as the common green or black glass. The sherds are light in color, reflecting care in producing a finely controlled batch with few impurities. The glass is free-blown and shaped in a wooden dip mold. These wooden molds were kept wet, thus forming a steam cushion between the wood and glass resulting in a smooth surface in contrast to the pebbly texture associated with metal molds. As the dip mold was smaller at the base to facilitate easy removal, and one of the sherds has one fairly complete edge and a small fracture on the opposing side from the opposite edge (see Figure 56), one can estimate an approximate width of 6.6 to 7.0 cm for that portion of the bottle. It is difficult to determine where this dimension falls on the overall vertical width column, but an estimate of a point about two-thirds of the length from the base is plausible.

Kaolin pipestems: Two nondescript Kaolin pipestems, illustrated in Figure 57, were recovered. The sample is not of significant size to attempt relative chronology from stem diameters.

Tinklers: Five brass or copper tinklers were found at the outside of the west wall and between the floor-boards of the structure. These are portrayed in Figure 58.

Beads: A rather mundane assemblage, consisting overwhelmingly of white or black simple tubular beads, and a few wire-wound beads were retrieved from below the floor of the structure and in flotation samples. The entire range of variation is presented in Figure 59 and the beads compare most favorably with the sample collected by Spector from Crabapple Point in Jefferson County Wisconsin (1975). A review of the collection housed at the State Historical Society leaves no doubt that the bead assemblages are almost

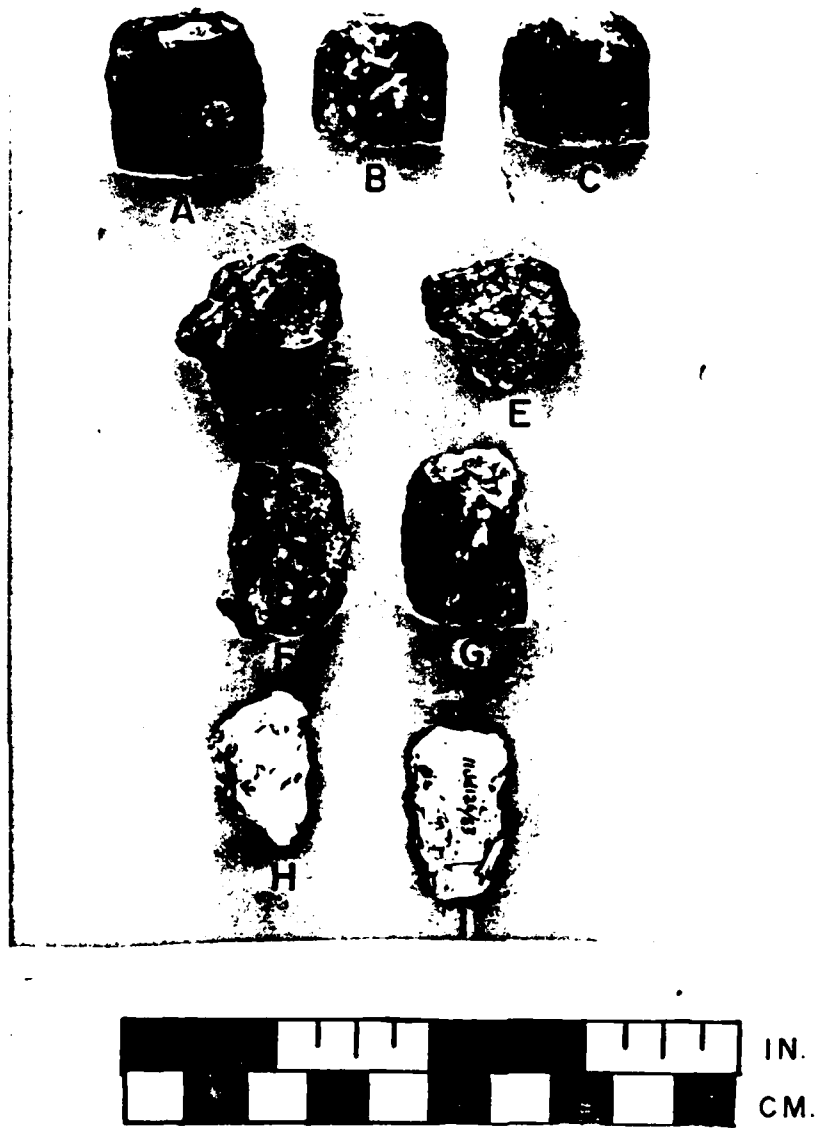


Figure 54: Gunflints, 11 Jd 126.

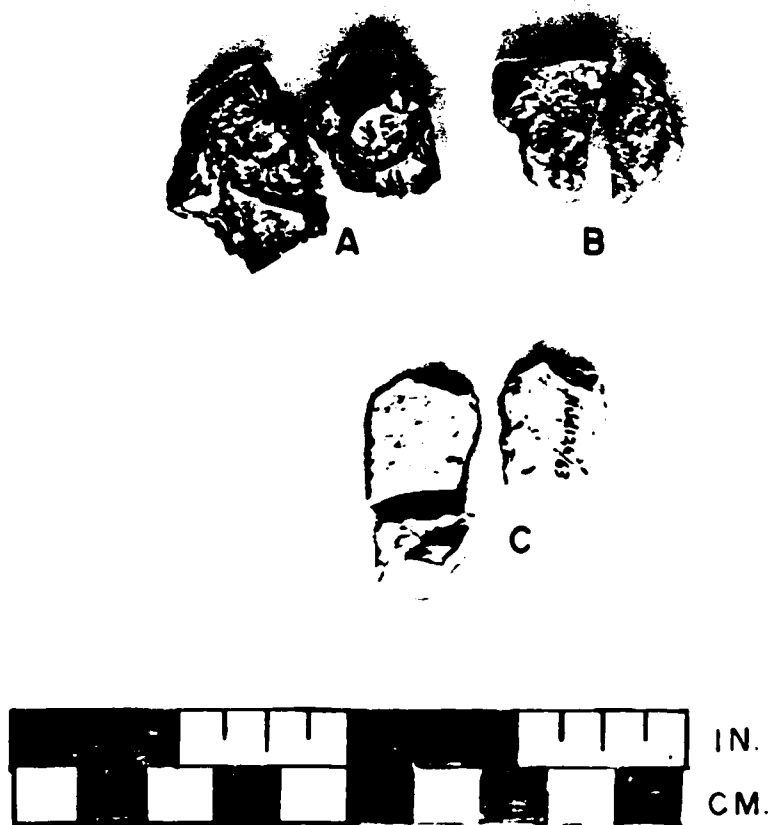


Figure 55: Fire-shattered gunflints, 11 Jd 126.



Figure 56: Case (Gin) Bottle sherds, 11 Jd 126.

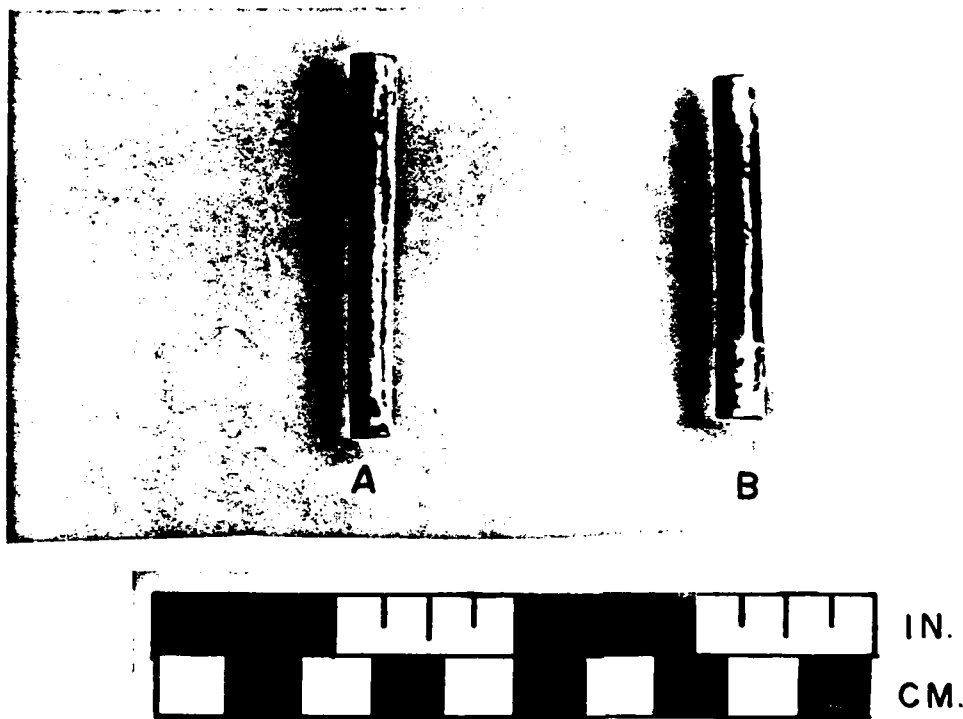


Figure 57: Kaolin Pipestems, 11 Jd 126.
(stem diameters-1.80 mm)

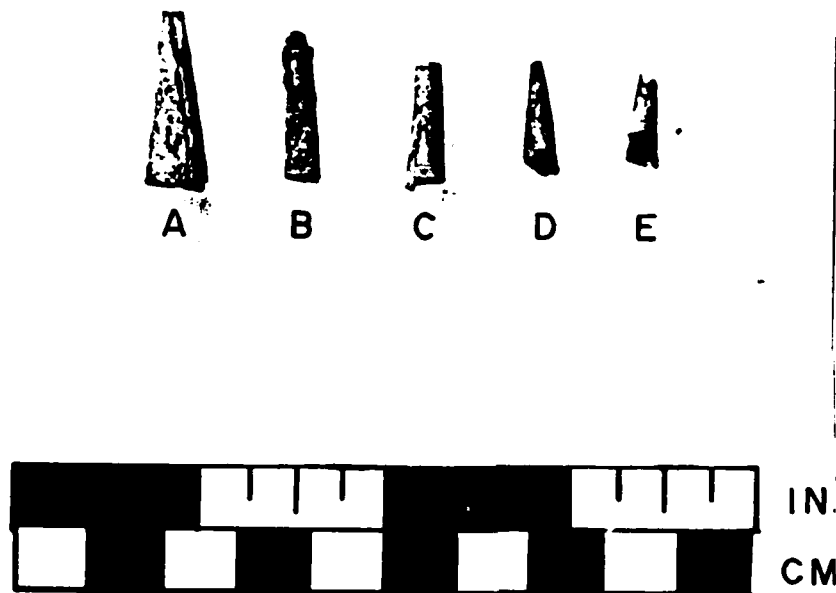


Figure 58: Tinklers, 11 Jd 126.

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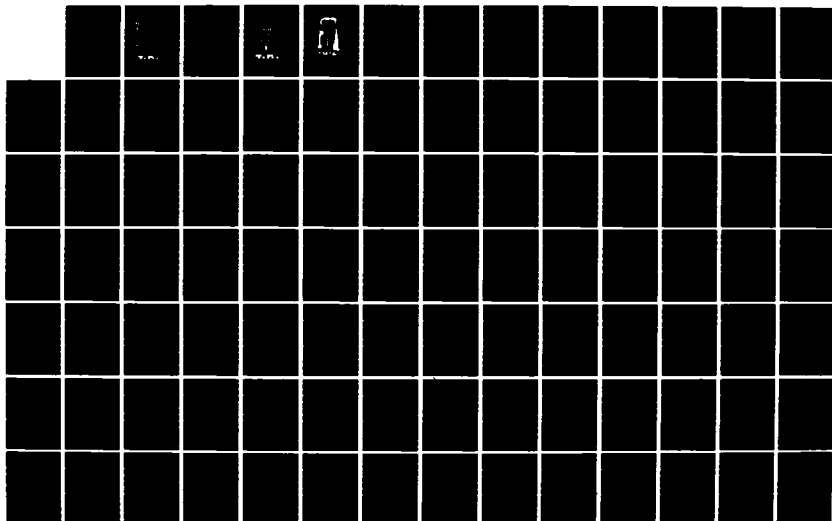
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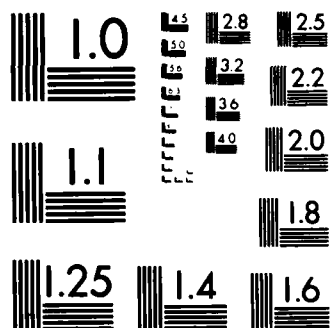
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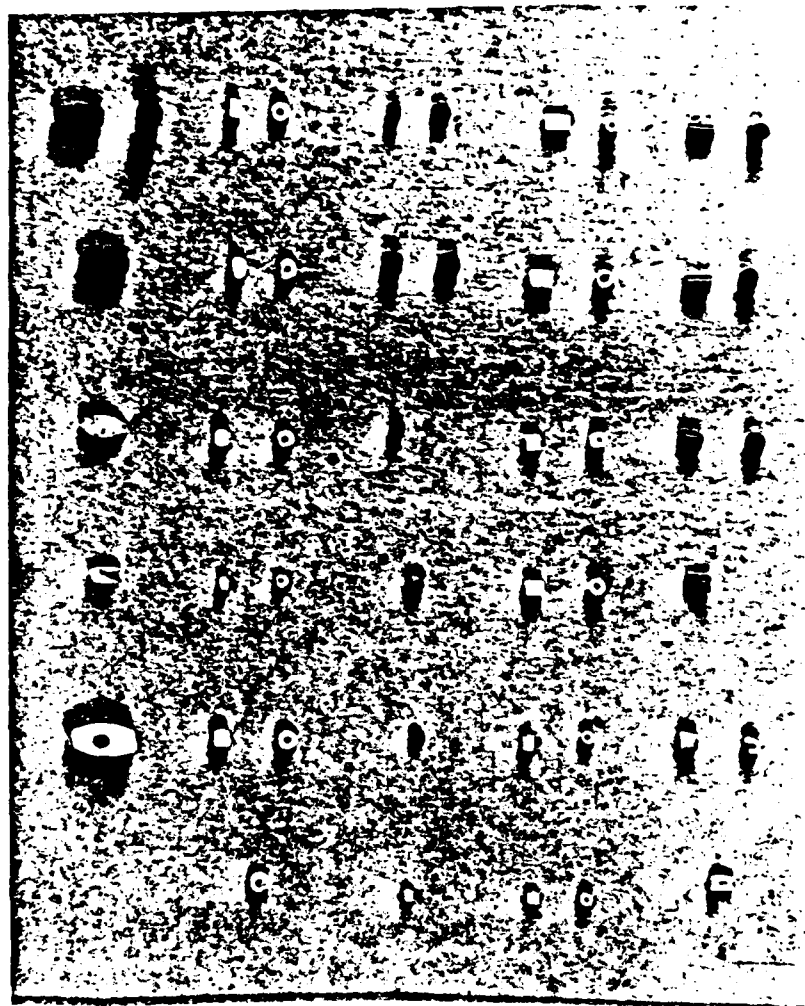


Figure 59: Bead assemblage, 11 Jd 126.

identical. Spector brackets the occupation at Crabapple Point with estimates of 1760-1800 by Winnebago residents. Given the geographic proximity, it is possible that the beads were derived from common sources.

Shot: A single musket ball and 26 specimens of shot, #9 and #3 representing the only sizes, occurred under the flooring and outside the margins of the structure. Many manifest the characteristic dimple from shot molds (see Figure 60).

Iron: A number of iron items were found, both in the burned daub layer, and below the flooring. Many of these are undoubtedly nails, an awl is represented, but others are not yet identified. As indicated in Figure 61, heavy oxidation and encrustations of burned daub preclude identification until the materials can be electrolytically cleaned.

Charred floral and faunal remains were also recovered from sub-floor contexts at the structure. Within the floral assemblage, corn kernels are most abundant, however, no cob fragments were noted suggesting that the corn was removed from cobs away from the structure and perhaps stored in a sack or bin. Beans also occur in significant numbers. Large fragments of hickory nuts including nut-meats, chenopodium, grass seeds, weed seeds, and other identifiable plant seeds complete the inventory. Bone exhibiting evidence of burning, including calcined bone and smoked (blackened) was common. The daub structure accounted for 73.3% of the bone recovered from 11 Jd 126, with most of the 294 fragments attributable to medium or large mammal long bones. Among the few identifiable fragments were those of a white-tailed deer, and a canid, either domestic dog or coyote. No fish remains were recovered. The smashed and broken composition of the faunal remains is suggestive of bone-grease manufacture so common in prehistoric sites in the region. More detailed presentations of the floral and faunal remains may be found in the appended reports of specialized analyses.

Failure to recover cultural remains that would allow finer chronological estimates is frustrating. Equally perplexing is the absence of specific items that would allow identification of the activities at the structure with the known historic commercial interest of lead mining or with the fur trade. In fact, aside from architectural features at the site, the entire assemblage would not be unanticipated in regional aboriginal sites of the period. It may be that this structure represents the domestic activities of one of the many unlicensed "wood runners" or coureurs de bois who inhabited the region. Additional investigations which would perhaps determine the existence of other structures or a compound complex will be required to clarify the 18th-19th century occupation at 11 Jd 126.

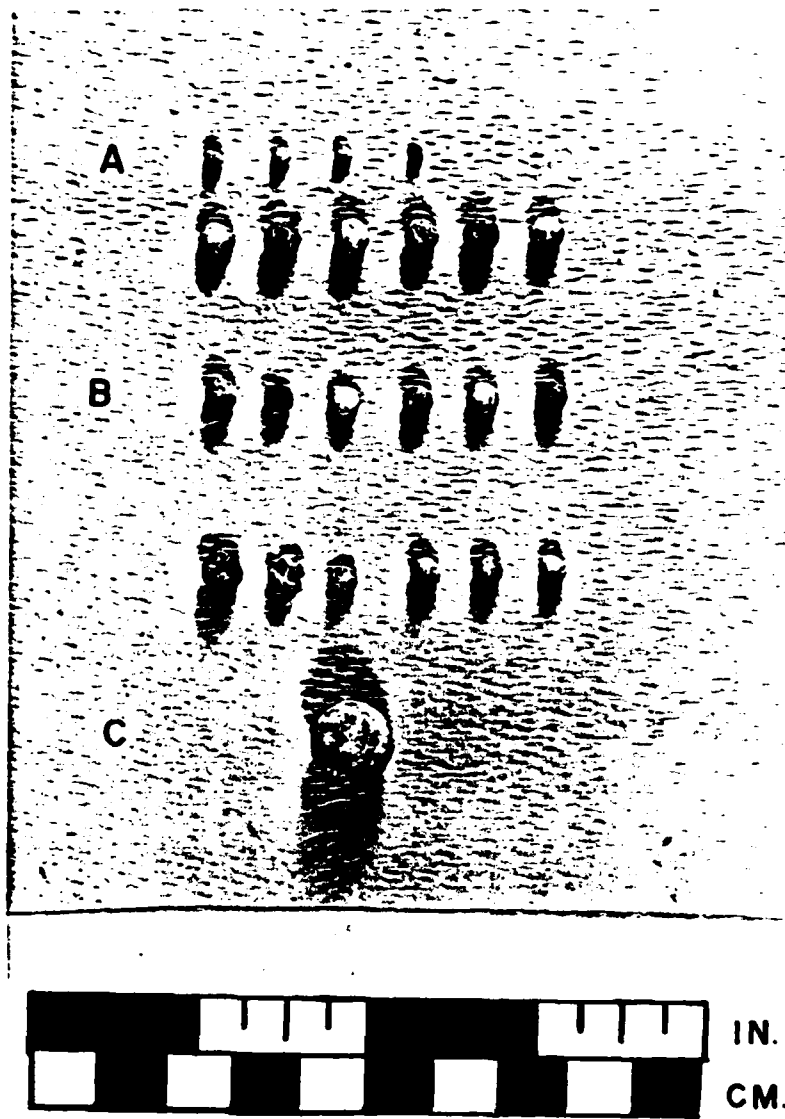


Figure 60: Musket ball and shot, 11 Jd 126.

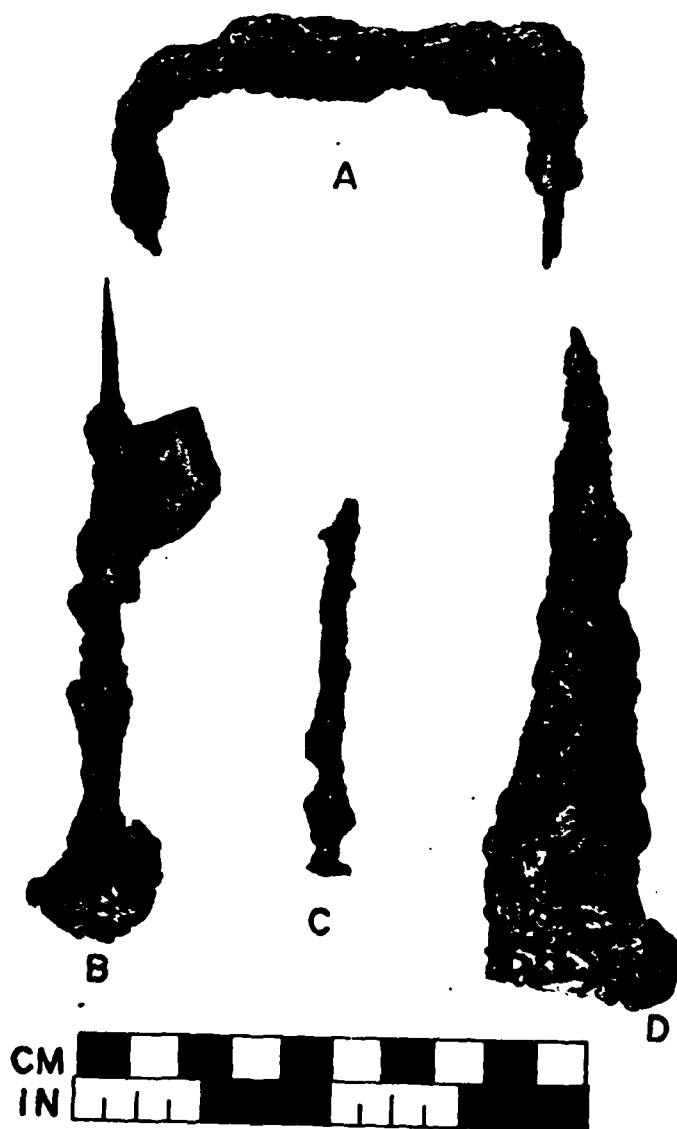


Figure 61: Iron items, 11 Jd 126, A, unidentified, B, Awl (?) with daub encrustations, C, Nail, D, Knife Blade (?).

War Department maps, developed by the U.S. Army Corps of Engineers in 1939, related to land acquisition and development of the 9 foot channel navigation system provide insights to early 20th century agricultural activities at 11 Jd 126. A complex of 11 buildings was situated within and on the east side of the barge terminal easement. According to informants, farming on the lowland floodplain was abandoned by World War II. No buildings remain and the evidence of the structures has been obliterated by the construction activities and the channelization of the Menominee River. Understory vegetation has obscured the old fencelines and access roads to the river at this location. There is little doubt that some of the recent debris encountered in the excavation units on the levee crest and backslope, and, in the surface collections at the easement derive from early 20th century farming activities.

Until recent times, as previously noted, vacation or recreational structures were erected on the levee at 11 Jd 126. Little disturbance accrued from this most recent occupation as the buildings were placed on footings or blocks. The burned remains of these structures, the footings, and recent trash are all visible on the surface at 11 Jd 126. The last "tenants" were removed during the 1960's.

SUMMARY AND CONCLUSIONS OF INVESTIGATIONS:

Intensive archaeological survey at 11 Jd 126 has resulted in the definition of several components at the site and has provided more precise boundaries to aid in future management and research. Several additional conclusions related to management and future research can be provided. The first of these reflects limitations of the current investigation and will likely influence future work at 11 Jd 126.

Limitations on data recovery:

Any investigator who has conducted archaeological research on the lowland floodplain of the Mississippi River in the Upper Valley is aware of the logistical difficulties. Access to the floodplain is always difficult. Vehicle access to 11 Jd 126 was impossible both because of construction activities or wet silts in which vehicles quickly become mired. More often than not, the easiest access is by boat travel, which in itself presents other logistical problems.

The nature of the soil matrix and the fluctuating water levels also present serious limitations. It is not unusual for water levels to rapidly rise, dependent not on rainy weather locally, but upon pool levels upstream. This results in inundation of excavation units, or, water seepage

through the bottom of the excavations. When the soil matrix is moist, a phenomenon encountered more often than not, screening is difficult. Water screening and cleaning of artifacts is slow and tedious. Washing soda aids in retarding flocculation of the silty matrix. Finally, scheduling needs to be constantly revised dependent on local water levels.

An additional limitation is the lack of comparative data from lowland floodplain contexts anywhere within the Pool 12 vicinity. To my knowledge, no other investigations have been reported for this topographic context in the pool. Previous investigations have emphasized the terraces and uplands where access is much less difficult and cultivated fields enhance data yields. As well, the matrix in terrace and upland settings consists largely of sandy outwash soils that are much less difficult for purposes of excavation.

Site impacts:

Recent land-use activities at 11 Jd 126 may be described as moderate. The 20th century farming activities at the site seem to have caused little disturbance to the archaeological deposits. Most of the cultivation was situated well away from the river and the site has never been plowed. The major disturbances have come from construction activities at the barge terminal and from erosional forces at the Frenress Lake Slough levee. Lateral erosion and slumping are much more serious at the northeast end of 11 Jd 126, coincident with the exposure of the old point bar or main channel feature. The loose sand is more quickly undercut than the finer sediments accentuating slumpage of the more resistant overburden. Unless shoreline protection is established along the levee face, erosion from flooding, and from boat-wakes will continue unabated. Once the barge terminal becomes active, wakes from barge traffic will accelerate erosion. (Note: plans are in progress to rip-rap 450' of shoreline at the slough margin. The barge terminal shoreline is also being protected and will be rip-rapped following construction.)

Future research potentials:

Prairie Phase: The ephemeral, and perhaps now destroyed, presence of a Prairie Phase occupation fosters the conclusion that 11 Jd 126 is not a fruitful domain to investigate questions related to this component. It is possible that additional shell middens lie buried on the levee backslope on old land surfaces. Given the extent of the site, it would be possible to determine the location of buried shell processing stations only by tight interval deep coring. A possible alternative would be the utilization of remote sensing techniques such as resistivity or ground penetrating radar. The destruction of the shell midden at the barge terminal easement is doubly unfortunate as 11 Jd 126 was the only shell midden identified during the survey investigations in Navigation Pool 12.

Trempealeau/McGregor Phase:

The component at 11 Jd 126 associated with Trempealeau/McGregor Phase occupation is determined both by the presence of pit features and by sheet midden. Scheduled recovery work at the barge terminal easement will undoubtedly expand the sample of Trempealeau/McGregor Phase materials and contexts at 11 Jd 126. The occurrence of carbonized floral remains, even though meager in our small sample, and faunal remains is to be expected. Thus the potential for detailing settlement and subsistence activities of Trempealeau/McGregor Phase populations on the lowland floodplain is extremely high. Additional samples of fresh water naiad remains from these early Middle Woodland contexts will reinforce the limited data secured during the intensive survey. Site 11 Jd 126 is the only site on the lowland floodplain where fresh water mussel procurement and processing has been identified for the Trempealeau/McGregor Phase.

Allamakee/Millville Phase:

No subsurface features could unequivocally be associated with Allamakee/Millville Phase habitation at 11 Jd 126. However the later Middle Woodland occupation occurs as sheet midden at several localities indicating that this component is expansive. Steuben points, cord-wrapped stick stamped, thin-walled, compact vessels (Levsen Stamped) and cord-impressed over smoothed surface forms (Lane Farm Cord-Impressed) are noted elements of Linn Ware, the ware associated with Millville/Allamakee habitation. Current models suggest the rapid abandonment of Hopewell-Havana related styles of ceramics in favor of Linn Ware forms (Benn 1979). This may not be the case at the Millville Site where both Linn Ware and Havana motifs occur. Freeman (1969), Stoltman (1979), and Benn (1979) have all addressed this question and their explanations of the phenomenon vary.

Thus, one of the major problems that can be addressed from the late Middle Woodland component at 11 Jd 126 is the relationship between the Trempealeau/McGregor and Millville/Allamakee Phases at the site. Did the local populations, as Benn suggests, rapidly abandon Illinois Valley motifs in favor of local styles? Or, is the transition from McGregor/Trempealeau to Millville/Allamakee less dramatic?

Of additional interest are the perceived differences in on-site activities. The purposes for which pits were excavated by early Middle Woodland occupants at 11 Jd 126 is not clear. The absence of such features, at this juncture, assigned to later Middle Woodland inhabitants may reflect both subsistence and settlement distinctions between Trempealeau/McGregor Phase and Millville/Allamakee Phase occupants.

Late Woodland, Keyes Phase, Maples Mills:

That Late Woodland occupation and utilization of 11 Jd 126 has resulted in the most expansive archaeological deposits is highly probable. While Middle Woodland deposits, based on very limited excavations, seem clustered at the northeastern end of 11 Jd 126, diagnostic Late Woodland materials have been encountered along the approximate 300 meter length of the Frentress Lake Slough levee. Some of the recovered ceramics can easily be classified within the framework of Madison Ware, while others, based on orifice configuration and design, fall within the Maples Mills category. Late Woodland deposits are noted both as pit features and as sheet midden.

Riggles's (1981) hypothesis that Maples Mills may have developed locally in western Illinois as early as A.D. 700 may be tested through the securing of radiocarbon assay samples from undisturbed contexts at 11 Jd 126. Resource procurement information for Keyes Phases inhabitants, as well as currently lacking settlement data, can be anticipated at 11 Jd 126. Finally, the differential distribution of Middle Woodland and Late Woodland occupation areas could be clarified. Following recovery operations, more than 90% of 11 Jd 126 will remain intact, assuming that bank protection will be forthcoming. The good opportunity for stratigraphic separation of Late Woodland contexts at the site holds high promise for the investigation of regional Late Woodland cultural dynamics that are now poorly understood.

Eighteenth Century Euro-American component:

Emergency recovery of the disturbed structure confirms the presence of late 18th century utilization of the floodplain. However, the data from the historic component are not consistent with the pursuits and activities noted in the historical accounts. We cannot definitely associate the activities indicated at the structure with either lead mining or the fur trade. Rather, the materials serve to elucidate the domestic activities.

In depth archival research may provide additional insights to the historic occupation at 11 Jd 126. Additional excavation should focus on the definition of additional structures, the presence of a fortified compound, and possible loci where lead smelting or processing were carried out. Ethnohistorical literature provides relatively compelling data that the region was Fox territory during the time the structure was occupied. Further, the primary attraction to the region for Euro-Americans was the readily available mineral deposit.

On the other hand, while historical documentation suggest (Edgar Oerichbauer, personal communication) that neither the XY nor Northwest companies applied their trade this far south, the tokens from the Catfish Creek locality and in the Fred W. Woodward Museum at Dubuque are cause for re-examination. Additional information, provided by Mr. Harris Palmer of Platteville, Wisconsin indicated the existence of an XY post on the Wisconsin River, near the confluence of the Wisconsin and Mississippi rivers. Mr. Palmer's reasoning that if an XY post was in the locale, Northwest Company operations would be situated in close proximity is sound (see Oerichbauer 1982).

Conclusions:

The overall importance of 11 Jd 126, in the absence of other floodplain investigations in the Pool 12 lowland floodplain, is difficult to assess. How unique and how critical to understanding Middle Woodland, Late woodland, and Euro-American archaeology of the region are the deposits at the site cannot be realistically evaluated until additional information from other sites is secured. Evaluation needs to be conducted at other Navigation Pool 12 sites. Emphases should be placed upon identified sites that are faced with immediate and imminent danger from erosion. In short, the true significance of 11 Jd 126 to reconstructions of regional historic and prehistoric archaeology cannot be understood unless contrasting data are at hand.

In spite of this serious limitation of a paucity of contrasting data from other sites on the Pool 12 floodplain, some tentative generalizations and interpretations can be presented. For example, there has been a tendency to view Woodland occupations on the floodplain, even though minimal information is available, as short-term extraction camps. This view is compatible with Theler's recent analyses for the Mill Pond site (47 Cr 186) (n.d.). Theler's model of settlement and subsistence practices for the Early Woodland-Middle Woodland Prairie Phase does not seem to fit the data from 11 Jd 126 nor for other sites on the Pool 12 floodplain.

For example, the lithic debitage and range of lithic implements at various sites denote a wide range of activities that are inconsistent with short-term extraction camps. As well, the kinds and quantities of ceramics, virtually the full range of Woodland regional culture is represented, architectural features, e.g., storage-refuse pits, sheet midden development, and other factors foster inferences of more enduring habitation. It may ultimately be borne out that the lowland floodplain was the location of substantial base camps from which easily accessible micro-environments of the terraces, bluff crests, uplands, and other riverine niches were exploited. The implications for reconstructing regional subsistence-settlement patterns

are clear. One cannot attempt any meaningful reconstruction without focusing on the most bountiful of habitats--the lowland floodplain. Finally, the utility of models that omit or downplay the significance of the lowland floodplain habitat are seriously impeded by the results of these investigations.

Fluvial geomorphology at 11 Jd 126 is dynamic and complex. Certain generalizations have been made about the Frenress Lake Slough locality that may or may not be applicable to other site situations on the lowland floodplain. We have demonstrated, for example, sedimentation rates at this locality for the very late Holocene. Further, based on the species of fresh water mussels recovered from Features 6 and 7, 11 Jd 126 seems to have been a side-channel setting during Middle Woodland times, providing useful information relating to thalweg chronology. Understanding the geomorphic processes and their relationships to buried landscapes and archaeological deposits is an important element of these investigations. The assistance provided by Dr. Richard Anderson, Department of Geology, Augustana College in both the field and the laboratory were critical to understanding these relationships.

At the current stage of research, little substantive data has been added to the history and prehistory of the Upper Mississippi Valley. In part, this is a function of the nature of survey investigations. Additionally, it is a function of the paucity of comparable contexts within the region. If, however, one contrasts the results of surveys conducted within Pools 12 and 16, it is clear that generalizing about site densities and distributions along the Mississippi River is unwise, particularly when one considers the limited state of survey work on the floodplain, the effects of the locks and dams on the floodplain, and the relative complexity of ecological settings. As Barnhardt et al note:

...it is still clear that the importance of collaborative efforts between archaeologists and geomorphologists has been validated. Such efforts might have been better structured than in the present research (see recommendations), but the major point is that contrast--such as the ones between broader floodplain (Pool 12) and narrower floodplain (Pool 16) lands that are almost permanently above water (Pool 12) and lands that are frequently almost entirely inundated (Pool 16), and more complex ecological settings (Pool 12) and less complex settings (Pool 16)--have isolated a series of variables that reflect the interplay between human and natural forces in the Mississippi River Valley.

These variables support a contention that detailed surveys are necessary to assess geomorphological and cultural features in river bottom areas, and that generalization will be relatively difficult. Management strategies will need to be tailored to specific areas, based on data gathered from those areas, and not cross-correlated from others (1982: 91).

Perhaps the most significant contribution to the history and prehistory of the Upper Mississippi Valley has been the demonstration of the necessary collaboration between archaeologists and sediment geomorphologists in the investigation of lowland floodplain sites. For Pool 12 specifically, the demonstrated potential of 11 Jd 126 as well as other lowland floodplain sites is viewed as a major contribution as previous investigations at this locality have not focused on this major topographic feature of the landscape. The result has been a biased and distorted view of regional historic and prehistoric archaeology derived from terrace and upland sites. Intensive survey at 11 Jd 126 demonstrates that the abundant resources of the floodplain habitat were at least of equal importance during prehistoric times to those of the terraces and uplands and contemporary models of short-term, specialized extraction camps for lowland floodplain settings is not viable for some segments of the prehistoric continuum in this section of the Upper Mississippi Valley.

TABLE 1-Lithic Inventory
Summary, 11 Jd 126

Provenience	Waste Flakes	Utilized Flakes	Core	Biface	Projectile Point	Shatter	Hammerstone Spalls
N10, W0							
Level 1							
Level 2							
Level 3	1						
Level 4							
Level 5	4					1	1
Level 6	4						
Level 7	6					2	
Level 8	2					1	
Level 9	3					2	
Level 10	2						
Level 11	1					2	
Level 12	1						
Level 13	1						
N0, W0							
Sod zone	6			1		1	
Level 1	7					1	
Level 2	9			1		2	1
Level 3	6					2	
Level 4	13	1				12	
Level 5	11					5	
Level 6	8					6	
Level 7	1				1	5	1
Level 8	2					1	
Level 9	1						
Level 10	1						
Feature 6							
Level 1	3					1	
Level 2	1						
Level 3	1			1			
Level 4							1

TABLE 1-Lithic Inventory
Summary, 11 Jd 126
(Cont'd)

Provenience	Waste Flakes	Utilized Flakes	Core	Biface	Projectile Point	Shatter	Hammerstone Spalls
Below level 4, wall scraping & slump	6					4	
Surface	28		1	1	3	8	
Profile 1	1						
Profile 2	1						
Profile 9	1						
Feature 7							
Level 1	2					1	
Level 2	13					6	
Level 3	13			1		12	
Level 4	13					5	
Level 5	11			1		2	
Level 6	6					1	
Level 7	11					7	
Level 6 & 7, slump- age	2						
Level 8, slumpage	19	2				7	

TABLE 2-Ceramic Inventory
Summary, 11 Jd 126

Provenience	Undecorated	Cord-Impressed	Dentate Stamped	Zoned-Dentate Stamped	Punctate	Boss/Node	Dentate Stamp w/Boss	Eroded Surface	Exfoliated	Totals	
										Rim	Body
Surface	8b							1b	11b	0	20
N10-W0											
Level 1										0	0
Level 2										0	0
Level 3										0	0
Level 4										0	0
Level 5	2b	3b			1r					1	5
Level 6	10b	1b, 1r							9b	1	20
Level 7	37b	4b			1r			85b	5b	1	132
Level 8	1b								4b	0	5
Level 9	3b								4b	0	7
Level 10								1b	4b	0	5
Level 11									1b	0	1
Level 12										0	0
Level 13									2b	0	2
N0-W0											
Sod zone										0	0
Level 1	3b								1b	0	4
Level 2	4b				1r					1	4
Level 3	10b	1b, 1r							3b	1	14
Level 4	7b								1b	0	8
Level 5	9b	2r, 1b							4b	2	14
Level 6	9b	1r, 1b	1b						9b	1	20
Level 7	1b								1b	0	2

b: body

r: rim

TABLE 2-Ceramic Inventory
Summary, 11 Jd 126 (Cont'd)

Provenience	Undecorated	Cord-Impressed	Dentate Stamped	Zoned-Dentate Stamped	Punctate	Boss/Node	Dentate Stamp w/Boss	Eroded Surface	Exfoliated	Totals	
										Rim	Body
Level 8	1r								1b	1	1
Level 9										0	0
Level 10										0	0
Feature 6											
Level 1									1b	0	1
Level 2									1b	0	1
Level 3								3r		0	3
Level 4										0	0
Below Level 4, slumpage	2b								1b	0	3
Feature 7											
Level 1	2b							1b	1b	0	4
Level 2	3r, 57b	1r, 3b							21b	4	81
Level 3	7b	1r, 3b							13b	1	23
Level 4	8b		1r, 1b			1b		1b	31b	1	42
Level 5	1r, 5b	1r						5b	15b	1	25
Level 6								4b	3b	0	7
Level 7	16b	1b	1b					17b	3b	0	38
Level 6 & 7 slumpage								5b	4b	0	9
Level 8									1b	0	1
Slumped remnant of Feature 7	22b	4b	1r, 1b	1b		1b		11b	4b	1	44

TABLE 3-Gunflint Attributes,
11 Jd 126

<u>Lot #</u>	<u>Form</u>	<u>Color</u>	<u>Maximum Length</u>	<u>Maximum Width</u>	<u>Maximum Thickness</u>	<u>Observations</u>
Jd126/63/1	Irregular	white	23.0	17.0	8.0	Possible platform, color thermally altered
Jd126/63/2	Platform	white	28.0	15.0	8.0	Shattered by fire, color thermally altered
Jd126/63/3	Spall	grey	20.5	21.5	5.0	
Jd126/65	Irregular	grey	29.0	27.0	7.0	Pot lids on surface
Jd126/69	Spall	grey	23.0	24.0	8.0	
Jd126/73/1	Platform	Honey	31.0	22.0	8.0	Shattered by fire, used with firesteel
Jd126/73/2	Platform	black	29.0	19.0	6.0	Potlids on surface, used with firesteel
Jd126/79	Spall	black	26.0	25.0	9.0	Potlids on surface

TABLE 4- Trade Bead Inventory
11 Jd 126

Classification system is derived from Spector (1974, 1975) based on a sample of 391 beads from Crabapple Point, Jefferson County, Wisconsin. Comparison of the 11 Jd 126 collection with the sample from Crabapple Point (housed at the Museum, State Historical Society of Wisconsin) indicated the assemblages are virtually identical. A similar collection from the Crawford Site, assigned to historic Fox (see McKusick and Slack 1962). Spector's classification is followed throughout.

Hollow Cane Classes

Class I: tubular beads of simple construction, untumbled, may or may not have adventitious surface decoration.

44 black (macroscopic) or deep red (microscopic) simple tubular beads.

Class II: beads of simple construction derived from Class I, but shaped through reheating and tumbling. May or may not have adventitious surface decoration.

46 black (macroscopic) or deep red (microscopic) tumbled tubular beads.

11 black (macroscopic) or deep red (microscopic) tumbled and re-shaped, donut shaped beads

1 dark blue, tumbled and re-shaped, donut shaped bead

1 light, translucent blue, tumbled and re-shaped donut shaped bead

Class III: tubular beads of compound (2 or more layers of glass on the initial rod) construction which may or may not have adventitious surface decoration.

81 clear/white opaque, untumbled tubular beads

Class IV: beads of compound construction derived from Class II, but shaped but shaped through reheating and tumbling.

56 clear/white opaque donut shaped beads

216 clear/white opaque tubular shaped beads

TABLE 4- Trade Bead Inventory
11 Jd 126 (cont'd)

Wire Wound Classes

Class WI: wire wound beads of simple shape. These are monochrome and lack surface decoration.

5 white, oval shaped beads

3 black (heavily pitted surfaces, likely from thermal alteration) oval shaped beads

Class WII wire wound beads of simple shape. These beads have decoration applied to the surface of the beads.

1 white, oval shaped bead with circular insets. insets are tuquois based on 1 inset, remaining three insets are missing.

Sample Size: 465

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APPENDIX A

SCOPE OF WORK

SCOPE OF WORK
FOR
AN INTENSIVE SURVEY
OF 11Jd126, NAVIGATION POOL 12
MISSISSIPPI RIVER, JO DAVIESS, COUNTY, ILLINOIS

OBJECTIVE

The purpose of this change order is to obtain an archaeological investigation of site 11Jd126 along the Mississippi River (mile 574.8 to 575.52), near East Dubuque, Illinois. The site is located in the SE1/2, NW1/4, SE1/4 in Section 3, T.28N./R.2W., Dunleith Township, Jo Daviess County, Illinois (Menominee IL-IA 7.5 minute USGS Quadrangle). The following described investigation requires survey and testing of a portion of site 11Jd126 to determine further recovery interest and for achieving management objectives, such as protection and preservation. A major goal of this investigation shall be to provide information on the potential of site 11Jd126 to answer current research objectives. This action is in accordance with the National Historic Preservation Act of 1966, as amended, EO 11593, the Archaeological and Historical Preservation Act of 1974, ER 1105-2-50 (draft regulation), and the Data Recovery Plan for the portion of the site threatened by dredging/channel cutting that will not be investigated under this contract. The portion of the site within the dredging/channel cutting easement was surveyed and tested by your organization in 1981.

PROJECT BACKGROUND

A detailed discussion of the project background is presented in the Data Recovery Plan developed by Rock Island District for that portion of the site to be affected by dredging/channel cutting (Incl 1). By way of summary, a portion of site 11Jd126 was encountered during channel cutting for a barge loading facility and was subsequently identified as a multi-component Woodland Period (LW, MW, possible pre-MW) habitation site buried under nearly a foot of alluvium. Site 11Jd126 was determined eligible for listing in the National Register of Historic Places by the Secretary of the Interior (Office of National Register) on 15 April 1982, based upon the results of archaeological testing within the easement area by GLARC. In order to allow the channel project to continue--it was then 80 percent complete--a Data Recovery Plan was developed for the portion of the site within the project easement. This plan also called for preservation of approximately 80 percent of 11Jd126 and riprap bank protection.

Both the Illinois State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation accepted the Data Recovery Plan, and it is anticipated that the archaeological investigations required under this plan will be carried out during the summer or fall of 1982. The Data

Recovery Plan requires the services of professional staff pursuant to Parts 60 and 64, Title 36 of the Code of Federal Regulations. The services required under this contract will also be in compliance with these regulations.

SPECIFICATIONS

1. The Intensive Survey (survey and testing) required under this change order applies only to the portion of 11Jdl26 outside the channel easement as shown in appendix 2 of the Data Recovery Plan (Incl 1).
2. Your proposal for the Intensive Survey required under this change order should be designed to be compatible with the Research Design and Research Problems sections described in the Data Recovery Plan. It is recognized that the work under this contract is of a different level--survey and testing as opposed to mitigation--; thus, you are encouraged to propose or emphasize research concerns appropriate to this investigation, and to tailor recovery methods accordingly. Performance of contract services shall be executed in a manner to insure the greatest contribution to an understanding of the prehistory of the region and site 11Jdl26.
3. Investigation will be made of the geomorphic processes and the relationships between levels of origin for features/living surfaces and natural geomorphological/sediment processes for the portion of site to be investigated under this contract.
4. At a minimum, your proposal should address the collection and interpretation of the following.
 - (1) refinement of the horizontal and vertical extent of the portion of the site outside the channel easement,
 - (2) the number of cultural components represented in the portion of the site outside the channel easement,
 - (3) the stratigraphic position of each component in relation to the geomorphological setting,
 - (4) type or types of activity and cultural affiliation represented by each component (for instance, is the component a midden or is it a village site, and what activities are inferred to have occurred),
 - (5) the relationships between the site, the environment, and surrounding resources,
 - (6) the current status of the portion of the site outside the channel easement (disturbed, totally mixed, undisturbed), and the vertical and horizontal extent of the disturbances,
 - (7) a consideration of the research problems listed in the Data Recovery Plan, attached as Inclosure 1.

5. Your proposal must include a plan detailing field strategy in relation to techniques to be employed at 11Jdl26. This plan must include a schedule of field activities, sampling strategies and goals, laboratory analysis procedures, and any consultant services necessary to fulfill the requirements under this contract. The plan will also include provisions for necessary professional level geomorphological studies to identify and define the sequence, depth, and extent of soil development. In order to attain maximum cost effectiveness without jeopardizing the significant informational content of this site, the Contractor shall, wherever possible, make appropriate use of power machinery for test trenching, test pitting, and removal of plowzone, sterile overburden, and natural strata devoid of cultural material. Power equipment as referred to in this instance includes, but is not limited to, backhoes, trenchers, and power augers.

6. The Principal Investigator shall be responsible for preparing a comprehensive technical and interpretive report on the investigation. Basic data description, including provenience and metrics, UTM coordinates for the site, and photographs and drawings will be provided in the draft and final reports for use both in support of the author's arguments and conclusions, and as a source of basic information that may find wider use by other archaeologists. The Principal Investigator shall formulate an interpretive/predictive discussion relating to the portion of the site outside the easement which will not be affected by channel cutting. This will be based upon the data recovered from 11Jdl26 to date (survey, testing, and data recovery), as well as comparative data from Mississippi River Pool 12 and the region. The survey and testing reports (draft form) by GLARC will be made available for inspection and use at the Clock Tower Building, US Army Corps of Engineers, Rock Island District, Rock Island, Illinois.

7. Six (6) draft copies of the Comprehensive Report will be submitted to Rock Island District for review 30 calendar days after completion of field work. The final report will be due 20 calendar days after receipt of review comments on the draft report; the Contractor shall then furnish 25 copies of the final document to the District. A master copy of the final report in reproduction format will be furnished to the Corps of Engineers with the submission of the final report copies. The Contractor will also prepare a separate summary report (1 copy) on this work suitable for public information and directed toward a nonprofessional audience. This report will also include 35mm color slides as appropriate. This District will then distribute the necessary copies to appropriate Federal agencies. You should be aware that a revised draft or drafts may be required prior to receiving a notice to proceed with production of the final reports.

8. Prior to acceptance of the final report by the Government, neither the Contractor nor his representative shall release any information or material of any nature obtained or prepared under the contract without prior approval of the Contracting Officer. After acceptance of the final report, its reproduction and use shall not be restricted by either party. The exact site location will not be included in reports released to the public.

9. Any artifacts or cultural material collected and any notes, photographs, or other data generated during the performance of contract services shall be curated with the Principal Investigator for preservation upon completion of the contract, but at the discretion of the SHPO and Rock Island Island District. All artifacts, notes, photographs, samples, and other data generated as a result of contract services will remain the property of the US Government, and shall be made available upon request by the District Cultural Resource Designee, Rock Island District, for interpretative programs or additional research purposes. All data generated by this contract shall be curated in one place. It is the Contractor's responsibility to safeguard all of this material and to provide one copy of an inventory and catalogue system to this District with the final report (separate).

10. Field work will commence within 7 calendar days of the date of contract award. A testing schedule will be submitted by the Contractor indicating the order of work and rate of progress for the services described in this Scope of Work. The Contractor will submit a weekly Memorandum for Record by the Wednesday following each week in the field, and every other Wednesday during analysis and report writing phases. These memoranda will indicate specific activities and accomplishments, and will outline schedules for future tasks. The Memorandum for Record shall be of sufficient detail to keep the District Archaeologist fully informed of progress, preliminary results, and interpretations.

11. Continuous coordination will be maintained with the District Archaeologist. Evidence of this and other relevant coordination (i.e., review comments) will be documented in the draft and final reports.

12. The contract period for this work shall be 112 days from the date of award. The survey and preliminary testing reports for past work under this contract are due as scheduled prior to this modification. The time extension required here is for the new work only.

REPORT FORMAT

The comprehensive report shall include, but not be limited to, the following items:

GENERAL

- I. Title Page
- II. Abstract
- III. Table of Contents
- IV. Introductory Section
 - A. Purpose of Report
 - B. Dates of Investigation

SPECIFIC INFORMATION

- I. Environmental Context of the Site
 - A. Physical features of the area
 - B. Soil types and nature of origin
 - C. Geomorphology and relationship to streams and the Mississippi River
 - D. Present vegetation and land use
 - E. Past conditions of land - alternatives of surface (recent and early historic)
- II. Previous Investigations
 - A. Published and unpublished material
 - B. Previous survey reports
 - C. Oral sources - amateur and professional
- III. Statement of research objectives (expected potential based on the above data, previous investigations at the site, other investigations in the general area, and the Data Recovery Plan).
- IV. Statement of Methodology
 - A. What was done at the site
 1. Survey strategy
 2. Excavation strategy
 3. Locations of excavations
 4. Discussion of sampling models used
 - B. How well does this work relate to the field strategy contained in the Data Recovery Plan
- V. Research Results
 - A. Provide precise verbal description of site boundaries, and in the township and range system, and in the UTM location system.
 - B. Clearly define site extent on both project maps and site specific maps.
 - C. Discuss any known or suspected activities which may have disturbed and impacted the sites, and the effects such actions may have on the interpretation of results.
 - D. Provide hypothesized site type, e.g., village, hunting camp, midden, etc., cultural affiliations and the rationale employed in determining these factors.
 - E. Discuss any known or suspected limitations on data recovery.
 - F. Provide a concise description of the internal structure of each component and any features observed; representative stratigraphic profiles and features should be included as appropriate.
 - G. Include appropriate photographs showing environmental, as well as cultural and geomorphological features.
 - H. Provide a concise discussion of known and potential information each component may yield in answering specific research questions described in the Research Design (DRP) or others resulting from this contract.

VI. Discussion of Project Impact

- A. Discuss nature and degree of known or potential impacts on the site
 - 1. What kind of impacts, flooding, erosion, construction, etc.
 - 2. Indirect impact, secondary or tertiary

VII. Recommendations for Further Work

- A. How much more can be learned from how much more effort
- B. How important is this site overall

VIII. Conclusion

- A. A thorough discussion of what has been added to the history and prehistory of the Mississippi River Valley by this work will be required.
- B. If no further work were to be done, what could be said about the cultural history of the area.

IX. Appendixes

- A. This Scope of Work
- B. Proposal
- C. Supplementary studies, i.e., pollen, C-14, etc.
- D. Location of artifact storage
- E. Coordination and review correspondence of SHPO, IAS, and COE, ACHP
- F. Artifact inventories
- G. Crew lists with name of supervisor specified and logs of time worked by individual*
- H. 11Jd126 IAS site form*

* Appendixes which will not be made available to the public.

APPENDIX B

ANALYSIS OF FAUNAL REMAINS

FAUNAL REMAINS

James L. Theler
University of Wisconsin-Madison

Freshwater Mussels (Naiades): 11JD126

There were 100 freshwater mussel valves representing a minimum of 53 individuals recovered from Features 6 and 7 at 11JD126 (see Tables 1 and 2). Although this sample is small, it is of some interest that the ebony shell, Fusconaia ebena, and the monkey face mussel, Quadrula metanevra, together comprise more than 90% of the identified mussels. The principal habitat of the ebony shell is found on a sand and gravel bottom under a rather strong current velocity. The monkey face occurs in a similar habitat, but shows a preference for a gravel substrate, reportedly at the margins of F. ebena populations (Smith 1899:290, 298; Coker 1919:22; 1930:215; Parmalee 1967:31).

At the turn of the last century, high density linear aggregates or "beds" of mussels numerically dominated by the ebony shell occurred at many locations in the main stem of the upper Mississippi River. Some of these beds commercially harvested for the shell button industry produced millions of F. ebena attesting to their great abundance (Smith 1899:299; Coker 1919:20,42). The installation of dams for hydroelectric power and navigation during the present century has resulted in a degradation of the river and the near extirpation of the ebony shell along with many other mussel species.

It is suggested that the mussels recovered from Features 6 and 7 at 11JD126 were harvested from an ebony shell bed existing under a rather high energy aquatic regime. The annual flux in water levels and water temperature of the Mississippi River restricts the period of freshwater mussel harvest by hand collectors to the summer and fall months or roughly between June and October. I presume this was the period of collection for shellfish found at 11JD126.

Vertebrates: 11JD126

A total of 401 bone fragments were recovered at 11JD126 and of this number 350 are mammal, 11 bird, 1 turtle and 39 of undetermined class. Bone exhibiting evidence of burning, including calcine bone and smoked (blackened) bone, accounted for 356 fragments or 88.8% of all bone (Table 3). The daub structure contained 73.3% of the site's bone, with most of the 294 fragments attributable to medium or large mammal long bones. No fish remains were recovered at the site.

At the species level, a calcine, right intermediate carpal of a white-tailed deer (Odocoileus virginianus) was recovered at the west end of the daub structure (Lot #62). Also present at this provenience is a calcine, left distal humerus, probably that of a domestic dog or coyote (Canidae).

In the N0, W0 unit, Level 1 (Lot #52), an unburned deer-sized mammal rib shows cut marks, apparently made with a steel saw, just below the vertebral extremity of the rib.

Vertebrates: 11JD115

A small number of animal remains were recovered from controlled surface collection and disturbed feature contexts at 11JD115 (Table 4). A left calcaneum and the right mandibular dentition (M3-P2) are assignable to white-tailed deer (Odocoileus virginianus). These unburned elements were associated with the disturbed feature (Lot #2) and were the only specifically identified bones at 11JD115.

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1899 The Mussel Fishery and Pearl-button Industry of the Mississippi River. U.S. Fish Commission Bulletin for 1898 18:289-314.
- Stansbery, David H.
1982 A List of the Unionid Mollusks of the Ohio River System. Museum of Zoology, Ohio State University, Columbus.

Table 1: Freshwater Mussels (Naiades) Recovered in Feature 6, 11JD126

<u>Taxon</u>	<u>Common Name</u>	<u>Feature 6: Shell Lens</u>		<u>Feature 6: Slumpage</u>	
		<u>Valves</u>		<u>Valves</u>	
		<u>Left</u>	<u>Right</u>	<u>Left</u>	<u>Right</u>
<u>Quadrula metanevra*</u> (Rafinesque, 1820)	Monkey face	9	6	9	1
<u>Fusconaia ebena</u> (Lea, 1831)	Ebony shell	14	16	1	3
<u>Cyclonaias tuberculata</u> (Rafinesque, 1820)	Purple warty-back	1	0	0	0
<u>Obovaria olivaria</u> (Rafinesque, 1820)	Hickory nut	1	2	0	0
Unidentifiable valves		4	1	1	-
Totals		29	25	2	4

*Taxonomy follows Stansbery, 1982

Table 2: Freshwater Mussels (Naiades) Recovered in Feature 7, 11JD126

<u>Taxon</u>	<u>Common Name</u>	Feature 7: Level 2		Feature 7: Below Level 4	
		<u>Valves</u> <u>Left</u> <u>Right</u>	<u>MNI</u>	<u>Valves</u> <u>Left</u> <u>Right</u>	<u>MNI</u>
<u>Quadrula metanevra</u> * (Rafinesque, 1820)	Monkey face	3 2	3	4 4	4
<u>Fusconaia ebena</u> (Lea, 1831)	Ebony shell	2 0	2	12 7	12
<u>Plagiola lineolata</u> (Rafinesque, 1820)	Butterfly	1 0	1	0 0	0
Unidentifiable valves		1 2	-	0 2	-
Totals		7 4	6	16 13	16

*Taxonomy follows Stansbery, 1982

Table 3: Faunal Remains Identified to Class and Unidentified Osseous Material, 11JD126.

Daub Structure

<u>Lot No.</u>	<u>Provenience</u>	<u>Class</u>	<u>> 6 mm</u>	<u>< 6 mm</u>	<u>Nonburned</u>	<u>Calcine</u>	<u>Smoked</u>
63	N100 W228	Mammal	33	-	0	18	15
63	N100 W228	Bird	3	-	0	0	3
65	N100 W225	Mammal	33	-	0	24	9
67	N99 W227	Mammal	4	-	0	4	0
67	N99 W227	Mammal	-	6	0	6	0
69	N100 W226	Mammal	13	-	7	6	0
69	N100 W226	Mammal	-	30	20	10	0
70	N99 W226	Mammal	16	-	0	16	0
70	N99 W226	Unidentified	-	30	0	30	0
71	N98 W224	Mammal	23	-	0	23	0
71	N98 W224	Mammal	-	31	0	28	3
72	N100 W225	Mammal	1	-	0	1	0
74	N99 W225	Mammal	24	-	1	9	14
76	N99 W224	Mammal	1	-	0	1	0
76	N99 W224	Mammal	-	8	0	8	0
77	N98 W224	Mammal	4	-	0	4	0
77	N98 W224	Mammal	-	4	0	4	0
77	N98 W224	Bird	-	7	0	5	2
77	N98 W224	Unidentified	-	6	0	6	0
79	Rock Feature 3	Mammal	6	-	1	3	2
79	Rock Feature 3	Bird	1	-	0	1	0
79	Rock Feature 3	Unidentified	-	3	0	3	0
83	Rock Feature 1	Mammal	7	-	7	0	0
Subtotals: Daub Structure			169	125	36	210	48

Table 3: Faunal Remains from 11JD126 (continued)

Feature 7

<u>Lot No.</u>	<u>Provenience</u>	<u>Class</u>	<u>> 6 mm</u>	<u>< 6 mm</u>	<u>Nonburned</u>	<u>Calcine</u>	<u>Smoked</u>
22	Level 4	Mammal	6	-	1	5	0
23	Level 5	Mammal	6	-	0	6	0
24	Level 6	Mammal	24	-	0	22	2
24	Level 6	Turtle	1	-	0	1	0
25	Levels 6-7 (slump)	Mammal	2	-	0	2	0
27	Level 7	Mammal	8	-	0	8	0
27	Level 7	Mammal	-	3	0	3	0

Controlled Surface Collection

9	NO W240	Mammal	43	-	5	38	0
9	NO W240	Bird	1	-	0	1	0
10	N250 W260	Mammal	-	4	0	4	0

Test Unit

52	NO W0, Level 1	Mammal	2	-	2	0	0
57	NO W0, Level 6	Mammal	1	-	1	0	0

Slumpage

29	South of Feature 7	Mammal	3	-	0	3	0
30	West side-barge cut	Mammal	1	-	0	1	0

Totals:	11JD126		267	132	45	304	50
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Table 4: Faunal Remains Identified to Class, 11JD115

<u>Lot No.</u>	<u>Provenience</u>	<u>Class</u>	<u>> 6 mm</u>	<u>< 6 mm</u>	<u>Nonburned</u>	<u>Caicine</u>	<u>Smoked</u>
1	Surface Collection	Mammal	2	-	0	2	0
1	Surface Collection	Mammal	-	1	0	1	0
2	Disturbed Feature	Mammal	29	-	27	2	0
3	Unnumbered Feature	Mammal	8	-	8	0	0

APPENDIX C

ANALYSIS OF FLORAL REMAINS

FLORAL MATERIALS FROM 11 JD 126

by

Constance Arzigian
Department of Anthropology
University of Wisconsin-Madison

ABSTRACT

The floral remains recovered from 11 Jd 126 provide some of the first good evidence concerning the utilization of plant resources by both prehistoric and historic inhabitants of the low floodplain of the Mississippi River in the Pool 12 area. The prehistoric materials, while not extensive, do indicate the exploitation of nuts and fruits. The more abundant floral remains from an historic daub structure provide a rare opportunity to examine one early household's diet, and include corn, beans, nuts and wild rice.

INTRODUCTION

Currently there is little good information concerning the exploitation of plants by prehistoric or historic populations inhabiting the low floodplain of the Mississippi River in the Pool 12 area. The 1981 and 1982 excavations at 11 Jd 126 were conducted to provide some subsistence information from this habitat. Bulk soil samples were taken from six prehistoric features, several midden contexts, and an historic daub structure, and processed for the recovery of organic remains.

The soil samples were allowed to air dry, then floated in the laboratory, using screens of .425 mm mesh size for both heavy and light fractions. All charred seeds, and all corn, nut and bean fragments larger than .85 mm from the historic structure. Materials were identified with reference to the paleoethnobotanical comparative collections in the Laboratory of Archaeology, University of Wisconsin-Madison.

The non-wood charred floral remains recovered from the 1981 and 1982 excavations are indicated in Tables 1 to 3. A variety of plant foods and weed seeds are represented from both Middle and Late Woodland contexts. While few in number, they do provide the first good evidence of plant use from this habitat in this area. The more abundant material from the historic daub structure includes a variety of cultivated foods as well as some wild plant foods and weeds derived from the site vicinity.

RESULTS

Prehistoric:

The prehistoric plant remains from 11 Jd 126 are limited. Wood charcoal was present in most samples, but only a few fragments of nutshell and a few seeds were recovered. This material is tabulated in Tables 1 and 2. Nutshell fragments occurred in 18 samples from six features and a midden, but the total quantity is very small. While species identifications are not possible, most of the nutshell is a dense thick-shelled nut, either hickory, walnut or butternut, probably hickory. Two cherry pit fragments and a number of seeds of lambs-quarters (Chenopodium sp.) were also identified. All of these could have been obtained from the low floodplain environment in the vicinity of the site from later summer through late fall, depending on the species, but storage, especially of nuts, may have delayed utilization until winter or early spring. Based on the freshwater mussel shells recovered from several contexts, Theler (this volume) suggests a summer to fall period of deposition of at least some of the features.

Historic:

The historic remains recovered from sub-floor contexts from the daub structure are more extensive and more varied. Quantities of corn, beans, some nutshell and nut meat, one grain of wild rice as well as a variety of weed seeds and grasses are represented. Ethnohistoric accounts (e.g. Gates 1965) document the acquisition of food supplies from the local Indian population. But these accounts tend to be sketchy at best, and for the structure at 11 Jd 126 there is no known ethnohistoric information. Therefore the floral and faunal remains recovered provide an opportunity to examine the archaeological evidence of one such "domestic" occupation by early Europeans.

Corn kernels are relatively abundant. The bulk of them were located in one place identified in the field as a rodent cache under the floor boards. There are no cupules or cob fragments from the site, suggesting that the corn had been removed from the cob elsewhere before being stored. The kernels are all large and crescent-shaped, and range from about 9 to 12 mm wide (averaging 10.5 mm) and from 7 to 8 mm deep (average 7.3 mm). There is little distortion from charring. Based on the overall size and shape, they are probably from 8-rowed cobs, Northern Flint or Eastern 8-rowed corn (Nickerson 1953). This type of corn matures early, is relatively resistant to cold, and was thus commonly grown in the northern midwest at contact and during later historic times.

The beans are the commonly cultivated bean, Phaseolus vulgaris L.. Measurements of the whole beans range from about 9.5 to 12.5 mm long, 6 to 8 mm wide, not taking into account any possible shrinkage from charring. The average length is 11.4 mm, the average width is 6.7 mm. Most have had the skins burnt off, but little distortion otherwise is apparent. This size range compares well to those from other prehistoric and early historic sites from the midwest, such as those listed by Blake and Cutler (1975).

The one wild rice grain recovered from the structure is a fragment measuring 4.45 mm long, 1.30 mm wide, and .90 mm thick. The pericarp and embryo have been charred off, or removed prior to firing. There has been no observable expansion or puffing out of the kernel as a result of the charring. Thus the grain was likely dry and/or parched prior to charring. Experimental work and evidence from other archaeological sites indicates that wild rice that had been charred moist shows considerable expansion and distortion (Ford and Brose 1975). (Seed identification confirmed by Richard Ford, pers. comm.).

A variety of weed seeds are present, but most of them are badly distorted by the charring, and therefore difficult to identify. A number of lambsquarters seeds are present, though there is no evidence that these were deliberately being collected. What is significantly missing are any of

the wild fruits and berries that would have been available to the occupants of the structure, or their absence may be a result of the season of the year during which the site was occupied. A number of hickory shell fragments, and one charred nut meat indicate that the inhabitants were exploiting their local environment for at least some plant foods.

Environment:

The cultivated foods, the corn and beans, were likely stored resources brought to the site as winter staples, though they may have been acquired locally. All of the other plants represented could have been obtained from the low floodplain of the Mississippi River, in the vicinity of the site. 11 Jd 126 is located on the levee crest and backslope adjacent to Frentress Lake Slough. The current vegetation of this area, while characterized by moisture tolerant wet forest species, also has patches of oaks and hickories in the better drained and higher elevations. Prior to construction of the locks and dams and the maintenance of artificially high water levels, these better drained areas were probably more extensive.

The species of nut present is impossible to determine, especially for the prehistoric components, but the larger fragments are one of the thick-shelled species of hickory. The largest specimens from the historic component are probably C. ovata, shagbark hickory. The bitternut (C. cordiformis) is a more common member of the low floodplain forest but shagbark, which has a sweeter kernel, is found on the drier elevations, and on the slopes and rich woods of the interior above the floodplain. Various species of cherry, while not common, are also found in the floodplain (Ware 1955, Curtis 1959).

The wild rice may have been obtained locally as part of the food supply, or may have been imported. Thus environmental interpretations based on this single specimen are shaky. Wild rice requires quiet waters but with enough current to prevent stagnation. It is possible that these conditions were met in one of the nearby side channels of the Mississippi River, or in the adjacent Menominee River.

SUMMARY AND CONCLUSIONS

Prehistoric subsistence remains from the low floodplain habitat of the Mississippi river are rare. The information from this site does indicate a continuing pattern of hunting and gathering in this region, but more research is needed to document how the exploitative strategies may have changed through prehistory.

The historic material may be compared to that recovered from the North West and XY Company wintering post in Burnett County recently excavated by Edgar Oerichbauer. This site,

dating to 1802-03, shows a mixture of staples such as corn and wild rice, and a variety of collected wild foods such as raspberry (Oerichbauer 1982: 230-231). Likewise, the Zimmerman site, an historic Kaskaskia Village in Northcentral Illinois, shows a full range of both cultivated crops such as corn and beans, and a large number of wild fruits and nuts (Blake and Cutler 1975: 92, N. Asch & D. Asch 1975: 116-120). 11 Jd 126 knows a minimum of such locally collected foods, with an apparent reliance on stored staples to complement the deer identified from the assemblage (Theler, this volume). Further research at the site may serve to determine if this is a function solely of the small sample size, or whether it accurately reflects the inhabitants' exploitation of their environment.

Provenience	Soil Volume (liters)	Juglandaceae # *	Carya sp. # *	Chenopodium sp #	Graminae #	Unidentified & Unidentifiable seed fragments #	Other #
Feature 1							
Zone B 40-55 cm	2.4	5		1			
Zone C 50-60 cm	2.4	3		1			
60-70 cm	2.4	3				4	
Zone D 70-80 cm	2.4	4	1				
70 cm bottom	2.4	1					
Profile, E ₂ ¹	2.4		1				
Total soil volume floated: 21.6 liters							
Feature 2							
Sample 1 0-10 cm	2.4	1				2	
Sample 3 21-30 cm	4.8			1			
Sample 5 41-50 cm	4.8	1		1		2	
Sample 6 51-60 cm	4.8						2 frags, <u>Prunus</u> sp.
Total soil volume floated: 26.4 liters							

Table 1. Charred Non-wood Floral Material Recovered from 1981 Excavations

Provenience	Soil Volume (liters)	Juglandaceae #	Carya sp. #	Chenopodium sp. #	Graminae #	Unidentified & Unidentifiable seed fragments #	Other #
Feature 3							
Sample B 10-20 cm	.7	3					
Sample C 20-25 cm	.5	2					
Sample G	.7					2	
NW $\frac{1}{4}$	4.7					3	
Total soil volume floated: 9.8 liters							

Feature 5

Total soil volume floated: 4.5 liters

(no charred floral remains recovered)

* no weights recorded, all quantities very small, less than .01 g.

Table 1. (continued)

Provenience	Soil Volume (liters)	Juglandaceae (nutshell)		-13 ^{sp} - <u>Chenopodium</u>		Graminae	Unidentified & Unidentifiable seed fragments	Other
		#	wt. (gm)	#	#			
Feature 6								
Level 1	3.2						13	1 cf. <u>Polygonum</u> sp.
Level 2	3.0	4	.01				2	
Level 3	2.4	1	.01					
Total soil volume floated: 12.6 liters								

Feature 7								
Level 2 outside light area	2.0	5	.04				5	
Level 2 light area	2.6	1	.01				2	
Level 3							2	
Level 4	2.6			1			2	
Level 5	1.7						1	
Level 6	.8	5	.015					
Level 7	.7	7	.01					
Level 8	1.6	1	.01				1	
Total soil volume floated: 17.3 liters								

N10W0 W $\frac{1}{2}$

Level 5	2.4			1	1		3	
Level 6	2.5						1	
Level 7	4.2	1	.01				5	
Level 9 (possible feature)	2.6						1	

Total soil volume floated: 24.0 liters

Table 2. Charred Non-wood Floral Material Recovered from 1982 excavations: Prehistoric Components

Provenience	Soil Volume (liters)	Corn kernels		Beans		Nutshell: Carya sp.		Chenopodium sp.	Graminae	Zizania aquatica wild rice	Unidentified & Unidentifiable seed fragments	Other
		#	wt (gm)	#	wt (gm)	#	wt (gm)	#	#	#	#	
N99W226 under Log 15	5.5	7f	.02								37	
N98W226 under Log 19	5.3*	3	.27			3	.06		1		28	2 Amaranthus sp. 66 Chenopodium/ Amaranthus sp.
N100.6W227.3 Dark stain on floor	2.3	1	.22	6	.46	35	.06	6	12	1	15	
N100W226 Lot 69	**			1	.11	4	1.65					
N100W225 Lot 72		9	.77	25	2.12	2	.53					1 Quercus sp. shell: .05 gm
N99W225 Lot 73 beneath concent.						4	.37	7			2	
N99W225 Lot 74		9	.38	3	.18	1	.42					
N99W224 Lot 76 burned concent.		71+	11.35						1		1	
Lot 76		11	1.20	1	.04							
Lot 77		17	1.02	4	.58	12	3.51					Nut meat .34 gm
N98W225 Lot 78		1	.10									
Lot 122				2	.11	1	.30					

Table 3. Charred Non-wood Floral Material Recovered from 1982
Excavations: Historic Component

* Light fraction less than .8 mm sampled, $\frac{1}{4}$ sorted

** Lot units represent floral samples identified in field, not bulk soil samples.

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DO NOT WRITE IN THESE BOXES

1)	WIS- 1492	11 Jd 126	
	Sample No.	Name (locale or origin)	Priority & Serial No.
2)	1630	\pm 100 years	B.P.
	Age	Error	$\delta^{13}\text{C}$ o/oo

PLEASE COMPLETE THE FOLLOWING: (use reverse side if more space needed)

3) Description of Sample

Substance of which sample is composed (giving scientific name where possible) -

Wood charcoal

Precise location of collection (including latitude and longitude to nearest minute, county and state/country) - Latitude 42°27' North, Longitude 90°35' West, Jo Daviess County, Illinois.

Occurrence and stratigraphic position in precise terms, including detailed description of the matrix - From multi-component prehistoric site, 11 Jd 126, level 5 (50 cm below disturbed surface) of Feature 7, a Middle Woodland storage pit. Matrix composed of a silty-sand alluvium.

4) Date of collection - September 25, 1982

Name of collector - David F. Overstreet

Name, address and organization of person submitting sample -

Dr. David F. Overstreet
Great Lakes Archaeological Research Center, Inc.
P.O. Box 1304
Waukesha, WI 53187

Name, address and organization of person to be billed, or if other arrangements have been made, please explain -

Dr. David F. Overstreet
Great Lakes Archaeological Research Center, Inc.
P.O. Box 1304
Waukesha, WI 53187

5) Further explanation, including possible significance and cultural correlation (attach stratigraphic sketches, etc.) -

Charcoal occurred in pit fill with lithic debitage, dentate stamped ceramics (Linn ware?), animal bone and other cultural debris. Context is useful for dating Middle Woodland occupation on the lowland floodplain of the Mississippi River as well as providing information relative to Holocene sediment geochronology.

Expected or estimated age - A.D. 300

6) Complete reference to relevant publications -

BOSZHARDT, ROBERT and DAVID F. OVERSTREET
1981 Preliminary Investigations-Archaeology and Sediment Geomorphology, Navigation Pool 12, Upper Mississippi River. Great Lakes Archaeological Research Center, Inc., Reports of Investigations No. 115, 3 Vol's. Waukesha, WI.

7) Description and significance of results as you would like it to appear in Radiocarbon.

The Middle Woodland component at 11 Jd 126 represents a previously unreported aspect of subsistence and settlement behavior for Allamakee/Millville Phase populations. Deeply buried, stratified components can be expected to occur on the lowland floodplain of the Mississippi River. Current models suggest that this is an environmental context utilized only as short term extraction camps. The subsurface features, range of cultural materials, and stratigraphic contexts provide new insights into prehistoric adaptive strategies and also allow for refinement of the chronology of Holocene sediments.

David F. Overstreet
David F. Overstreet 1/4/83

Signature

date

APPENDIX E

SIEVE AND PIPETTE ANALYSIS
OF SOILS

SOILS ANALYSES AND GEOMORPHOLOGICAL RECONSTRUCTION

Dr. Richard C. Anderson
Department of Geology
Augustana College

Excavation at the barge-cut, conducted in 1982 resulted in the definition of the north-south profile of the main channel, sub-surface sandy formation. However, because of construction activities, the overlying silt mantle could not be accurately mapped (Boszhardt and Overstreet 1982: 46-48). To clarify the morphology of this topographic feature, eight soil profiles were cut and mapped along the generally east-west axis of the eroding levee. As noted, these soil profiles were spaced approximately 10 meters apart with the intent of clarifying the depth of silt deposited atop the underlying formation, and securing an accurate understanding of the configuration of the sandy deposit. Figure 36 depicts the north-south configuration of this landform and the locations of the features recovered from the barge cut in 1981. Figures 36-43 portray the soil profiles mapped along the erosional face of the Frentress Lake Slough levee and Figure 44 presents the extrapolation of the east-west configuration based on the soil profiles.

The underlying sandy formation slopes gently to the northwest and represents the core of the natural levee. It is possible that Thalweg 2, hypothesized by Dr. Anderson is responsible for deposition of the sandy material when the old channel was active. After the formation of the natural levee, hydrological changes took place, and finer grained sediments were deposited. At the time of the Middle Woodland habitation at 11 Jd 126, this underlying feature must have been very thinly mantled by silts as the location of the Steuben point in level 7, 0-0 and the Middle Woodland features in the barge-cut serve to indicate.

In the overlying silt mantle, Late Woodland materials were recovered from very near surface on the levee crest to 70-80 cm below the surface on the backslope, indicative perhaps of increased sedimentation during Late Woodland times. Finally, the deposition of approximately 30-40 cm of silt at this locale since the late 1700's, the inferred date of the historic structure, provides an accurate measure of recent depositional history at 11 Jd 126. Taken together, prehistoric and historic occupations at Jd 126 present good opportunities for understanding rates from about 300 B.C. to the present.

At my direction, soil columns were collected at soil profile 8 and at the west wall of test pit 10N-0W to secure additional information regarding the nature of the silt sediments overlying the sandy sub-surface formation. Samples were bagged in 10 cm increments, air-dried and shipped to the geology laboratory at Augustana College for size and particle analysis. The following narrative and tabulation summarizes the results of laboratory analysis and interpretation. The results of these analyses, combined with those of samples collected earlier along the barge cut (section 1; see figure 2) and in core 1 (NO, WO; figure 2) provide information about the sedimentological characteristics of these materials and thus about the depositional processes by which they originated.

Sedimentological Characteristics The grain size of these samples was determined by standard sieve and pipette techniques (Folk, 1974). These analyses provide information not only about the mean grain size and proportions of sand, silt and clay, but also about the sorting (standard deviation from the mean) and the symmetry of the grain size distribution.

The results of these analyses are summarized on figures 44a-44d. Section 1, located at the intersection of the barge cut and the center line of the survey, shows 15 cm of dark brown (101R 4/3), very poorly sorted loam (fig. 44e) overlying 62 cm of yellowish brown, well sorted medium to fine sand with cross-bedding which dips away from Frentress Lake Slough (fig. 44a).

Core 1 was collected on December 12, 1981, by Robert Boszhardt and Richard Anderson. At this time the site survey grid had not yet been established so the exact location of Core 1 is unknown. It lies on the crest of the levee probably very close to NO, WO. The sediments in Core 1 consist of 145 cm of medium to fine sand, very similar to that exposed in the barge cut, overlain by 10 cm of very poorly sorted sandy loam (fig. 44b).

Samples collected at station N10, WO (fig. 2), the levee backslope excavation, extend from the surface to a depth of 160 cm. In general, the sediments are poorly sorted silt loam which show an irregular tendency to become finer from bottom to top (fig. 44c)). Very similar sediments are exosed at soil profile 8 (fig. 2, 44). Here the sediments are also silt loam, but the fining upwards tendency is much more clearly defined (fig. 44d). The distribution of grain sizes in almost all of these samples is either symmetrical around the mean or else skewed toward the finer sizes (Table A).

Interpretation Site 11 Jd 126 lies on a low ridge which parallels the edge of Frentress Lake Slough. The ridge is

SECTION 1
(INTERSECTION OF DARGE CUT
AND CENTER LINE OF SURVEY)

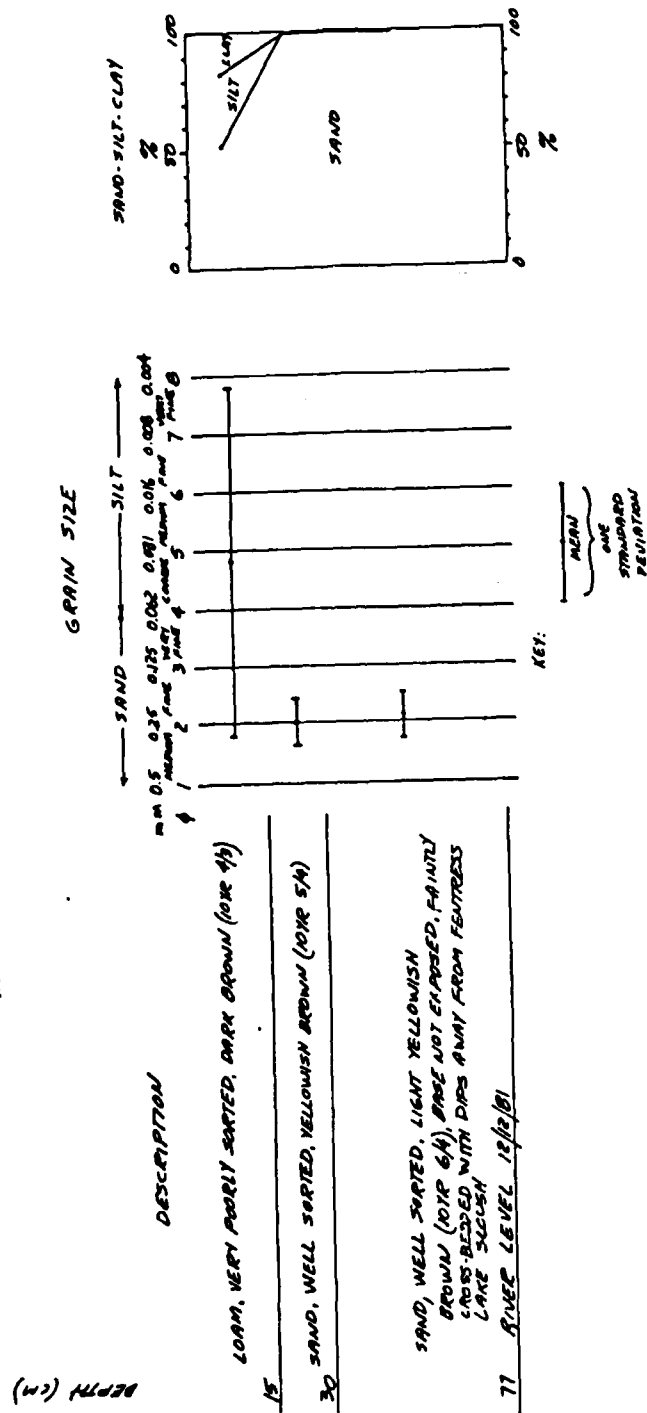


FIGURE 44a:

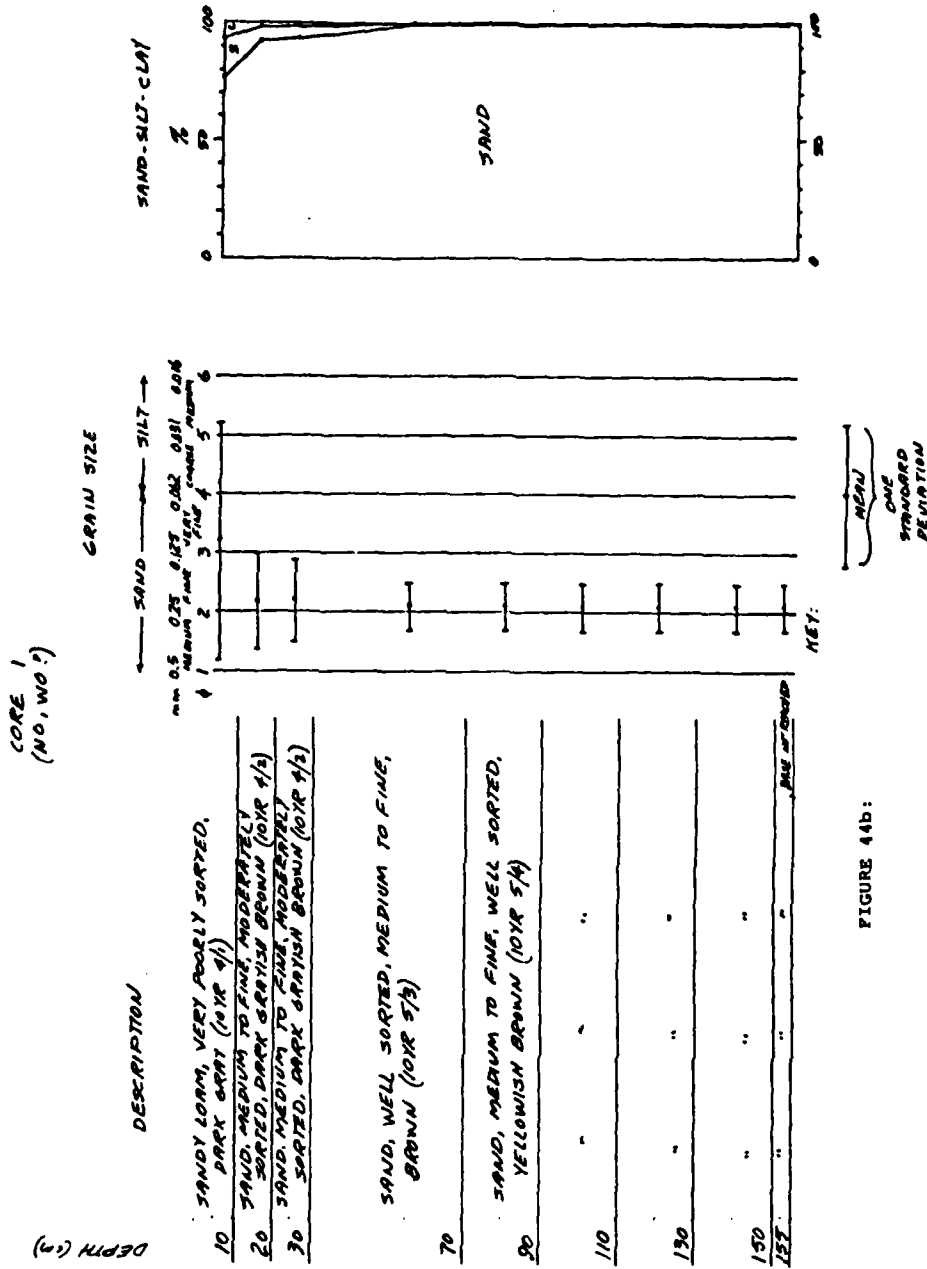
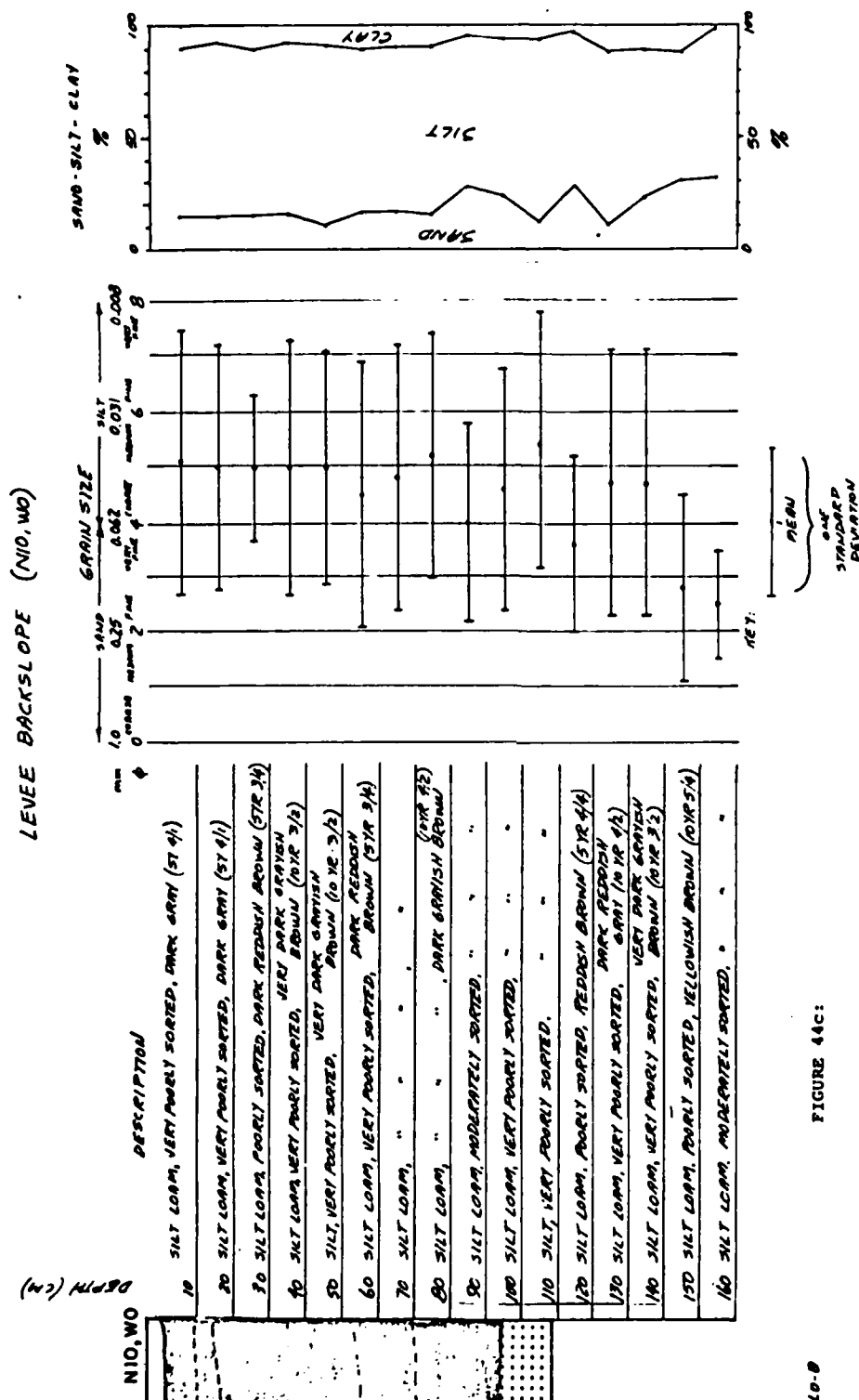


FIGURE 44b:



SOIL PROFILE 8

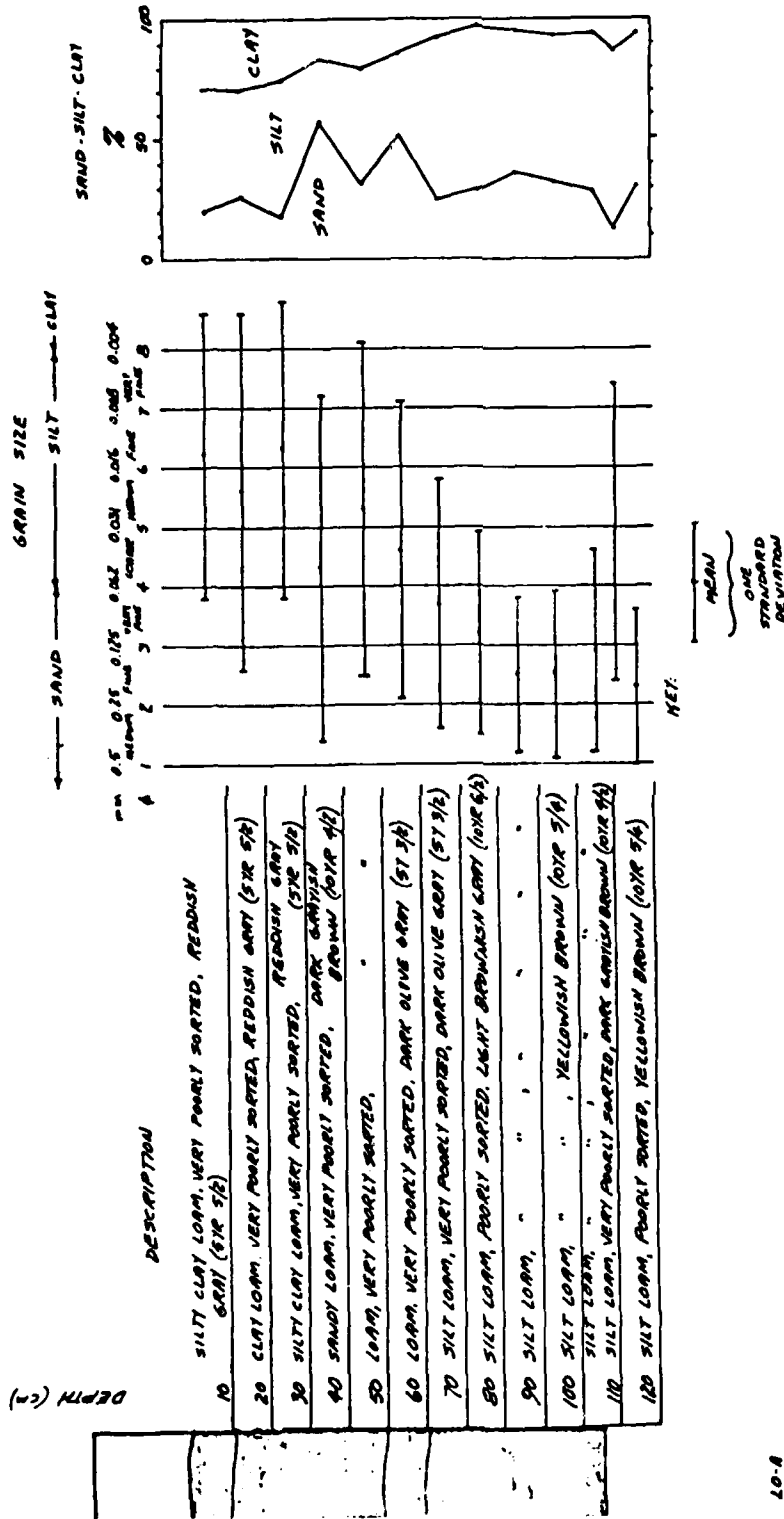


FIGURE 44d:

10-8

FIGURE 44e:

TEXTURAL CLASSIFICATION OF THE
U.S. DEPARTMENT OF AGRICULTURE

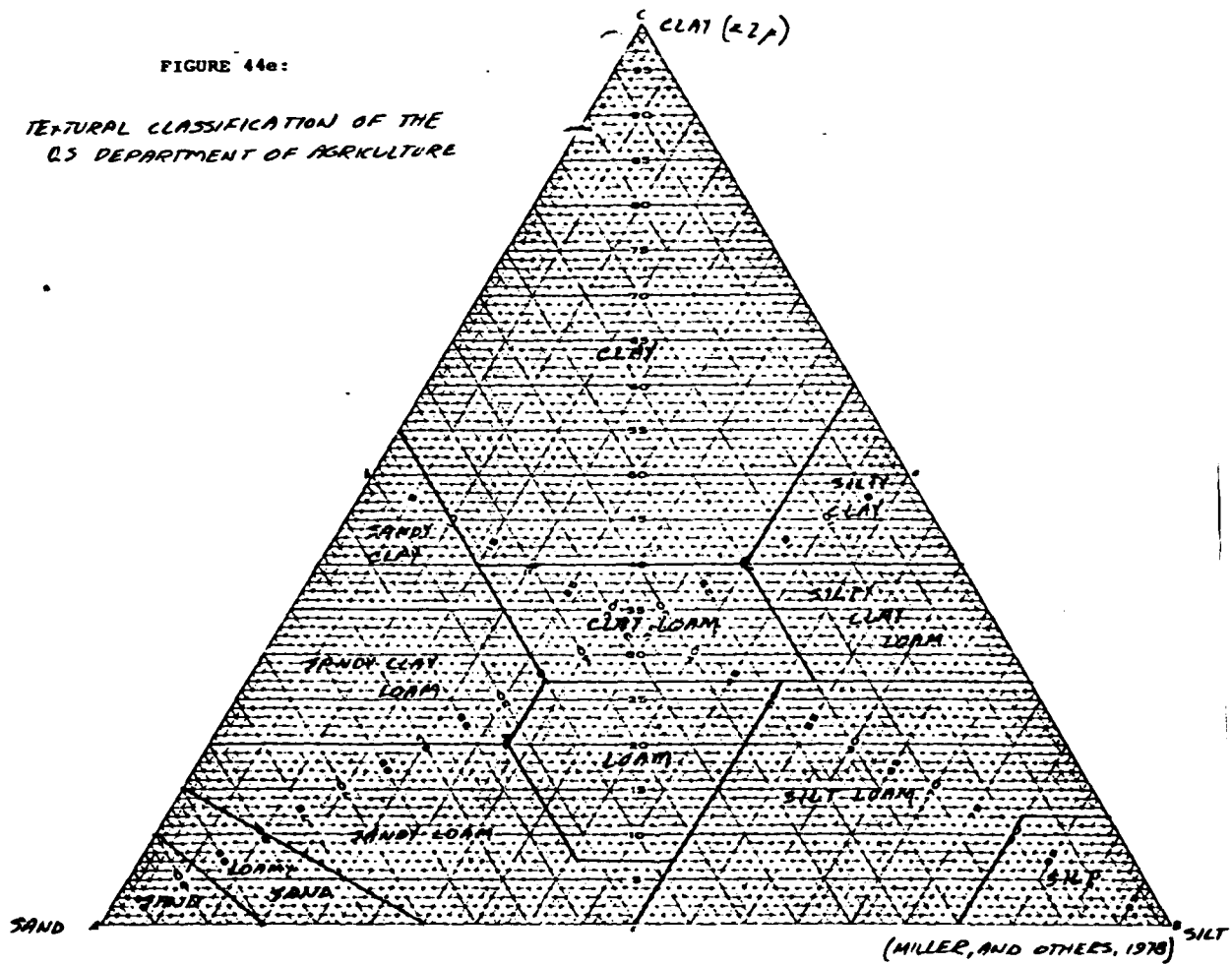


TABLE A
SEDIMENTOLOGICAL CHARACTERISTICS

LEEVE BACKSLOPE (N10, W0)

Depth (cm)	Color	M _d	M _z	σ _I	SK _I	SSC
0-10	dark gray 5Y 4/1	5.2φ medium silt	5.1φ medium silt (2.7φ-7.5φ)	2.4φ very poorly sorted	-0.05 near symmetrical	14.5 75.5 10.0 100.0 silt loam
10-20	dark gray 5YR 4/1	5.0φ medium silt	5.0φ medium silt (2.8φ-7.2φ)	2.2φ very poorly sorted	0.00 near symmetrical	14.8 78.5 6.7 100.0 silt loam
20-30	dark reddish brown 5YR 3/4	5.0φ medium silt	5.0φ medium silt (3.7φ-6.3φ)	1.3φ poorly sorted	0.00 near symmetrical	15.5 74.3 10.2 100.0 silt loam
40-50	very dark grayish brown 10YR 3/2	5.1φ medium silt	5.0φ medium silt (2.9φ-7.1φ)	2.1φ very poorly sorted	-0.13 coarse skewed	10.5 81.5 8.0 100.0 silt 148 silt
50-60	dark reddish brown 5YR 3/4	4.5φ coarse silt	4.5φ coarse silt (2.1φ-6.9φ)	2.4φ very poorly sorted	0.11 fine skewed	16.1 73.3 10.6 100.0 silt loam
60-70	dark reddish brown 5YR 3/4	4.7φ coarse silt	4.8φ coarse silt (2.4φ-7.2φ)	2.4φ very poorly sorted	0.06 near symmetrical	16.2 73.9 9.9 100.0 silt loam
70-80	dark grayish brown 10YR 4/2	5.6φ medium silt	5.2φ medium silt (3.0φ-7.4φ)	2.2φ very poorly sorted	-0.19 coarse skewed	15.3 75.0 9.7 100.0 silt loam
80-90	dark grayish brown 10YR 4/2	3.5φ very fine sand	4.0φ coarse silt (2.2φ-5.8φ)	1.8φ moderately sorted	0.30 fine skewed	27.5 67.7 4.8 100.0 silt loam

TABLE A (continued)
LEVEE BACKSLOPE (N10, W0)

Depth (cm)	Color	M _d	M _z	σ _I	SK _I	SSC
90-100	dark grayish brown 10YR 4/2	3.9φ very fine sand	4.6φ coarse silt (2.4φ-6.8φ)	2.18φ very poorly sorted	0.57 strongly fine skewed	23.4 70.6 6.0 100.0 silt loam
100-110	dark grayish brown 10YR 4/2	5.5φ medium silt	5.4φ medium silt (3.2φ-7.6φ)	2.22φ very poorly sorted	-0.13 coarse skewed	12.0 81.3 6.7 100.0 silt
110-120	reddish brown 5YR 4/4	3.6φ very fine sand	3.6φ very fine sand (2.0φ-5.2φ)	1.6φ poorly sorted	+0.14 fine skewed	28.0 68.4 3.6 100.0 silt loam
120-130	dark reddish gray 10YR 4/2	4.6φ coarse silt	4.7φ coarse silt (2.3φ-7.1φ)	2.4φ very poorly sorted	+0.08 near symmetrical	10.4 78.0 11.6 100.0 silt loam
130-140	very dark grayish brown 10YR 3/2	4.6φ coarse silt	4.7φ coarse silt (2.3φ-7.1φ)	2.4φ very poorly sorted	+0.08 near symmetrical	22.8 66.8 10.4 100.0 silt loam
140-150	yellowish brown 10YR 5/4	2.8φ fine sand	2.8φ fine sand (1.1φ-4.5φ)	1.7φ poorly sorted	+0.29 fine skewed	30.8 57.9 11.3 100.0 silt loam
150-160	yellowish brown 10YR 5/4	2.3φ fine sand	2.5φ fine sand (1.5φ-3.5φ)	1.0φ moderately sorted	+0.19 fine skewed	32.1 67.7 0.2 100.0 silt loam

SOIL PROFILE 8

Depth (cm)	Color	M _d	M _z	σ _I	SK _I	SSC
0-10	reddish gray 5YR 5/2	6.5φ fine silt	6.2φ fine silt (3.8φ-8.6φ)	2.4φ very poorly sorted	-0.17 coarse skewed	20.0 silty 51.1 clay 29.0 loam 100.0
10-20	reddish gray 5YR 5/2	5.6φ coarse silt	5.6φ coarse silt (2.6φ-8.6φ)	3.0φ very poorly sorted	+0.01 near symmetrical	26.1 44.1 clay 29.8 loam 100.0
20-30	reddish gray 5YR 5/2	6.5φ fine silt	6.3φ fine silt (3.8φ-8.8φ)	2.5φ very poorly sorted	-0.29 fine skewed	17.3 silty 57.3 clay 25.4 loam 100.0
30-40	dark grayish brown 10YR 4/2	3.7φ very fine sand	4.3φ coarse silt (1.4φ-7.2φ)	2.9φ very poorly sorted	+0.38 strongly fine skewed	57.1 26.3 sandy 16.6 loam 100.0
40-50	dark grayish brown 10YR 4/2	5.1φ medium silt	5.3φ medium silt (2.5φ-8.1φ)	2.84φ very poorly sorted	+0.07 strongly fine skewed	32.5 46.7 loam 13.9 100.0
50-60	dark olive gray 5Y 3/2	3.9φ very fine sand	4.6φ coarse silt (2.1φ-7.1φ)	2.52φ very poorly sorted	+0.32 strongly fine skewed	51.1 35.0 loam 13.9 100.0
60-70	dark olive gray 5Y 3/2	2.9φ fine sand	3.7φ very fine sand (1.6φ-5.8φ)	2.06φ very poorly sorted	+0.60 strongly fine skewed	24.9 68.0 silt 7.1 loam 100.0
70-80	light brownish gray 10YR 6/2	2.5φ fine sand	3.2φ very fine sand (1.5φ-4.9φ)	1.70φ poorly sorted	+0.54 strongly fine skewed	28.8 68.4 silt 2.8 loam 100.0

SOIL PROFILE 8 (continued)

Depth (cm)	Color	M _d	M _z	σ _I	SK _I	SSC
80-90	light brownish gray 10YR 6/2	2.3φ fine sand	2.5φ fine sand (1.2φ-3.8φ)	1.33φ poorly sorted	+0.46 strongly fine skewed	35.6 60.0 silt 4.4 loam 100.0
90-100	yellowish brown 10YR 5/4	2.3φ fine sand	2.5φ fine sand (1.1φ-3.9φ)	1.38φ poorly sorted	+0.66 strongly fine skewed	32.2 61.4 silt 6.4 loam 100.0
100-110-	yellowish brown 10YR 5/4	2.4φ fine sand	2.9φ fine sand (1.2φ-4.6φ)	1.66φ poorly sorted	+0.67 strongly fine skewed	28.2 66.2 silt 5.6 loam 100.0
-110 gray clay	dark grayish brown 10YR 4/2	4.8φ coarse silt	4.9φ coarse silt (2.4φ-7.4φ)	2.54φ very poorly sorted	+0.10 fine skewed	12.8 75.1 silt 12.1 loam 100.0
110-120	yellowish brown 10YR 5/4	2.2φ fine sand	2.3φ fine sand (1.0φ-3.6φ)	1.29φ poorly sorted	+0.53 strongly fine skewed	30.7 63.6 silt 5.7 loam 100.0

composed primarily of medium to fine sand but is mantled by silt loam which varies in thickness from 10 cm at the highest point of the ridge to more than 160 cm at a point on the backslope 10 meters from the crest. The sand is interpreted as a natural levee formed during the time that Fretress Lake Slough functioned as the main channel of the Mississippi River (fig. 6). This interpretation is based upon the form and location of the sand body; its internal, crossbedded structure; and the grain size of the sand itself. These are characteristics of natural levees which have been described elsewhere (Allen, 1965; Fisk, 1947; Jackson, 1975; Reineck and Singh, 1980; Ritter and others, 1973). The sand was probably deposited during a single flood. Natural levees are formed as water rises out of the channel during flood. Beyond the channel the velocity of flow is suddenly reduced and deposition occurs, the coarsest and thickest sediment being deposited on the bank immediately adjacent to the channel, thus forming the natural levee. During rising flood stages a previously deposited natural levee may be severely eroded, only to be rebuilt during the maximum and waning stages of the flood. After the main channel of the Mississippi River had shifted to location 3 (fig. 6), the natural levee at 11 Jd 126 ceased to function and was progressively buried by backwater silts deposited during subsequent floods, a situation that persists to the present. The shells of side-channel organisms were deposited under these conditions (fig. 10, 11).

Although it is not possible to date the formation of the natural levee, some speculations concerning relative chronology are possible. Thalweg 1 (fig. 6) of the Mississippi River in this area predates the natural levee and, hence, also the occupation of 11 Jd 126. It also predates the formation of the Crooked Slough outlet and the alluvial fan of the Menominee River. On the other hand, it seems likely that Thalweg 1 is younger than the latest maximum discharges associated with Glacial Lake Agassiz and Glacial Lake Duluth, about 9500 B.P. (Clayton, 1982). These large volumes of relatively clear water were erosive in character, brought an end to valley train deposition, and resulted in the formation of terraces in the valley train deposits such as the one now being exploited by Dubuque Sand and Gravel (see Boszhardt and Overstreet, 1981, figure 7). It is quite possible that Thalweg 1 functioned as the main channel of the river immediately following the last of the Lake Agassiz-Lake Duluth discharges and that it ceased to function as a result of the westward displacement of the river by the growth of the alluvial fan at the mouth of the Menominee River. The latter may have formed in response to the reduced discharge down the Mississippi River after 9500 B.P., or it may be a response to mid-Holocene drought that terminated about 6000 B.P. (Knox, 1972). In fact, the alluvial fan may be a response to both these factors in combination. Assuming this to be the case, the growth of

the alluvial fan and the displacement of the Mississippi to the position of Thalweg 2 was probably complete by shortly after 6000 B.P.

The length of time during which the main channel occupied Thalweg 2 (Frentrees Lake Slough) is unknown, but some estimate can be made of the minimum length of time elapsed since Thalweg 2 was abandoned, based on the thickness of the slackwater silts deposited on the flanks of the natural levee and the character of their associated archaeological materials. The maximum observed thickness of the backwater silt loam is 160 cm at the levee backslope excavation (N10, W0). Inasmuch as this excavation did not reach the base of the silt loam, the total thickness is unknown. The sandiest sample came from the base of the excavation, however, and suggests that the base of the silt loam lies, at most, only a few 10s of cm below the base of the excavation (fig. 44c).

Sedimentation rates during the last 20 years in Pools 4 through 10 are as high as 2.5 cm/year in many places and exceed 5 cm/year in a few places (GREAT, 1980). Prehistoric rates are unknown, but Middle Woodland artifacts were recovered at a depth of 130 cm in the levee backslope excavation (Boszhardt and Overstreet, 1982). If it is assumed that Middle Woodland has an age of about 2000 B.P. (Houart, 1971, Table 2), then 130 cm of silt loam accumulated at a rate of about .065 cm/year, and about 2500 years were required for 160 cm to accumulate. This calculation, of course, does not take into account more rapid sedimentation during historic time. This factor is unknown at 11 Jd 126, but were it to be included, the result would be a decrease in the prehistoric sedimentation rate and an increase in the length of time since Thalweg 2 was abandoned. If this highly speculative analysis has any validity, it would appear as though Thalweg 2 has been abandoned for at least 2500 years.

The sequence of geomorphic events at 11 Jd 126 can be summarized as follows:

1. Deposition of glacial outwash as valley trains, terminating about 12000 B.P.
2. Discharge of water from Glacial Lakes Agassiz and Duluth; erosion of previously deposited valley train sediments produced terraces, including the remnant now exploited by Dubuque Sand and Gravel; terminated about 9500 B.P.
3. Formation of Thalweg 1.
4. Displacement of the river from Thalweg 1 to Thalweg 2 as a result of the growth of the al-

luvial fan at the mouth of the Menominee River; possibly accomplished by 6000 B.P.

5. Migration of the river to Thalweg 3 and later to Thalweg 4, prior to 2500 B.P.; initiation of backwater sedimentation of silt loam.
6. Occupation by Middle Woodland people; continued overbank sedimentation.
7. Arrival of Europeans; accelerated sedimentation; 1800 A.D. to present.

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374-375.

APPENDIX F

LOCATION OF ARTIFACT STORAGE

Great Lakes Archaeological Research Center, Inc.
7509A West Harwood Avenue
Wauawatosa, Wisconsin 53213

APPENDIX G

CREW LISTS

Field:

Martha Tappen: 9/8, 9/9, 9/10, 9/11, 9/12, 9/13, 9/15,
9/16, 9/17, 9/18, 9/19, 9/20, 9/21, 9/22,
9/23, 9/24, 9/27, 9/28, 9/29, 9/30, 10/1,
10/2, 10/3.

James Clark: 9/20, 9/21, 9/22, 9/23, 9/24, 9/25, 9/26,
9/27, 9/29, 9/30, 10/1, 10/2, 10/3.

Mark O'Malley: 9/8, 9/9, 9/10, 9/11, 9/12, 9/13, 9/14,
9/15, 9/16, 9/17, 9/18, 9/19, 9/20, 9/21,
9/24, 9/25, 9/26, 9/27, 9/28, 9/29, 9/30,
10/1, 10/2, 10/3.

Paul Lurenz: 9/8, 9/9, 9/10, 9/11, 9/12, 9/13, 9/15,
9/17, 9/18, 9/20, 9/22, 9/24, 9/27, 9/29,
10/1, 10/2, 10/3.

David Overstreer
Supervisor: 9/8, 9/9, 9/10, 9/11, 9/12, 9/13, 9/15,
9/17, 9/18, 9/19, 9/21, 9/22, 9/24, 9/26,
9/27, 9/29, 9/30, 10/1, 10/2, 10/3.

Volunteers: Mr. Robert Boszhardt and two students
from UW-La Crosse, Mr. Curtis Weiss, Mr.
Ray Miller contributed a total of 87
hours to assist with emergency recovery
at 11 Jd 126 and 11 Jd 115.

Laboratory:

Martha Tappen: 10/18, 10/19, 10/20, 10/21, 10/22, 10/26,
10/27, 10/28, 10/29, 11/1, 11/2, 11/3,
11/4, 11/5, 11/11, 11/12, 11/15, 11/16,
11/17, 11/18, 11/19, 11/29, 11/30, 12/6,
12/7, 12/8, 12/9, 12/10.

Paul Lurenz: 10/18, 10/19, 10/20, 10/21, 10/22, 10/25,
10/26, 10/27, 10/28, 10/29, 11/1, 11/2,
11/3, 11/4, 11/5, 11/8, 11/9, 11/10,
11/11, 11/12, 11/15, 11/16, 11/17, 11/18,
11/19, 11/22, 11/23, 11/24, 11/25, 11/26,
11/29, 11/30, 12/1, 12/2, 12/3, 12/6,
12/7, 12/8.

David Overstreet
Supervisor:

Approximately 1/2 time devoted to project
during the months of November, 1982 -
February, 1983.

Nikki Wackman:

approximately 1/2 time during the months
of January and February, 1983.

James Theler:

Unsupervised specialized analyses of
faunal remains, December - February,
1983.

Constance Arzigan:

Unsupervised specialized analyses of
floral remains, January - March, 1983.

Richard Anderson:

Unsupervised specialized analyses of
soils, December - March, 1983.

APPENDIX H

SITE FORM, 11 Jd 126

Recorded

Survey No

County Jo Daviess
Twp. Dunleith
Quadrangle Menominee

Reg. Inst. No.
Culture M. & L Woodland, Hist.
Type of site Habitation

Legal Description (1/4's)
Center, S 1/2,
SW, NW, SE, &
NE, NE, SW

Sec. 3 Twp. 28 N Range
2W

Site owner U.S. Army Corps of Engineers

U.T.M. A (SW corner)
697420E-4702870N

Site address

B (NW corner)
697420E-4702950N

Previous owners

Present tenant

C (NE corner)
697720E-4702830N

Directed to site by

Mapped by

D (SE corner) 697720E-
4702830N

Extent of site (area and depth) 330 m. along Frentress Lake Slough,

Previous excavation cultural deposits, Surface-2.0 m deep.

Pitting

ENVIRONMENT

Topography and Location On high ground on northeast shore of Frentress Lake Slough levee between Crooked Slough and Menominee River.

Water supply Mississippi & tributaries.

Drainage Good to poor

Nearby sites 11 Jd 115

Modern occupation (building, plowing, etc.) Former structures have been removed.

Type of soil Silt, sandy silt, san.

Ground cover nettles, poison ivy, lowland forest.

MATERIAL FROM SITE

Maples Mills, Lane Farm Cord Impressed, Havana Ware, Madison Ware, Leysen Cord Wrapped Stick Stamped ceramics, Steuben points, small triangular points, floral & faunal remains, beads, gunflints, other historic items.

Surface coll. by Boszhardt & Overstreet

Date 1981

Institution

Tested by Overstreet

Date 1982

Institution

Excavated by

Date

Institution

Nature and extent of survey - Field conditions

See Glarc, Inc. Reports of Investigations 115 & 119.

Curation Glarc, Inc., P.O. Box 1304, Waukesha, WI 53187

MATERIAL REPORTED AS BELONGING TO SITE

Owner of Material

Certainty of Origin

Site reported by

Date

Visited

Survey report by

Date

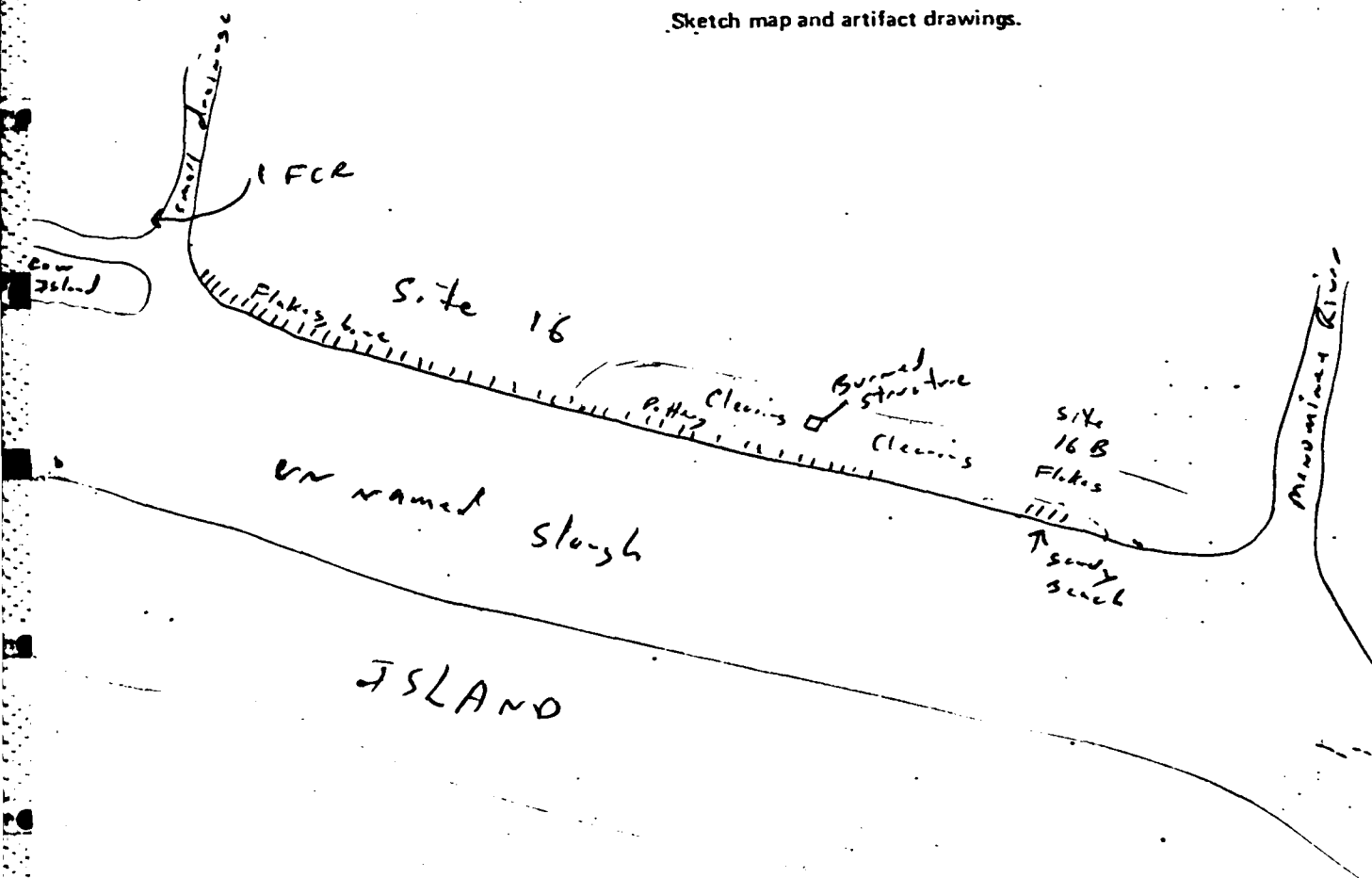
Publications:

Photos:

Study status:

Remarks:

Sketch map and artifact drawings.



APPENDIX I

RECOVERY PLAN 11 Jd 126

DATA RECOVERY PLAN

FOR

ARCHAEOLOGICAL SITE 11JD126

IN MISSISSIPPI RIVER POOL 12

JO DAVIESS COUNTY, ILLINOIS

INTRODUCTION

The Data Recovery Plan that follows results from the adverse effects of dredging for an access channel to a barge unloading facility by the Dubuque Sand and Gravel Company, PO Box 25, Dubuque, Iowa. Mr. Floyd Thompson, President of the Company, applied for a Department of the Army permit for this work on 18 September 1978. As the channel would have to cross Federal land, an easement was also requested of the Rock Island District, US Army Corps of Engineers. The channel easement was to be located in the SE $\frac{1}{2}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$ in Section 3, Township 28 North and Range 2 West, Dunleith Township, Jo Daviess County, Illinois (Menominee IL-IA 7.5 minute USGS Quadrangle). The barge channel will connect the unloading facility with the Mississippi River within Navigation Pool 12 at approximate river mile 575.4 (appendix 1).

BACKGROUND

At the time the permit application was made, the Great Lakes Archaeological Research Center (GLARC), of Waukesha, Wisconsin, was conducting a cultural resources reconnaissance of US Army Corps of Engineers owned or administered lands in Mississippi River Pool 12 under contract with the Rock Island District. In June of 1981, the District requested that the easement area be checked by GLARC for cultural resources that might be affected by dredging. A letter from GLARC, dated 20 July 1981, stated that it did not appear that the proposed undertaking would affect known cultural resources; however, the portion of the easement near the Mississippi River could not be checked because it was partially under water.

The District requested comment from the Illinois State Historic Preservation Officer (SHPO) by letter of 23 July 1981, pointing out that the land in question had been only partially examined but that it appeared to be a recent formation due to meandering of the Menominee River and subsequent alluviation.

The letter also noted that the area had been disturbed by recent historic occupation and use, as well as from sand extraction over the years. The SHPO responded by letter of 11 August 1981 that the project would have no effect on cultural resources. Therefore, the permit and easement were issued by the District on 14 August 1981.

Dredging and channel cutting began in September 1981. In August 1981, archaeological site 11JD126 was discovered by GLARC staff during the course of their Pool 12 survey. Surface collections along the Mississippi River bank recovered artifacts from disturbed contexts and no features were observed. A late, Late Woodland cultural affiliation was hypothesized. The site was not identified earlier because of high water. At the time the site was discovered, it was felt that the site limits did not extend southeast along the Mississippi River into the area scheduled for dredging by the Dubuque Sand and Gravel Company; thus, the District Archaeologist was not notified at this time.

During September 1981, the site was fortuitously revisited by GLARC staff who discovered that cultural materials were exposed in the profile of the first dredge cut. Additional materials were scattered on the ground surface within the easement that had been uncovered by tree clearing and scraping activities. This cultural deposit was determined to be part of site 11Jd126 based upon the lithic and ceramic items, and because the materials were located along the same natural levee. It is now clear that this portion of the site had been covered by nearly a foot of alluvium, and it is understandable that no artifacts were found in the area of the shoreline because a large sand deposit was located between the site and the Mississippi River within the easement area. In addition to the artifacts, a shell midden was identified along the dredge cut which appeared to be associated with the prehistoric occupation.

District staff were notified on 16 October 1981 that archaeological site 11Jd126 was being destroyed by dredging. A field inspection of the site was conducted by District staff on 23 October 1981 to evaluate the cultural deposit and to determine the extent of destruction. A cultural deposit averaging 40 centimeters thick was noted in the dredged profile. Lithics, ceramics, and shell were noted both within the profile and on the ground surface. The site area within the easement scheduled for further dredging was estimated at 25 meters by 25 meters, roughly corresponding to the natural levee paralleling the Mississippi River.

A second onsite meeting was held on 29 October 1981 with representatives from the SHPO's office (Staff Archaeologist, Dr. Margaret Brown), GLARC (Mr. Bob Boszhardt), Rock Island District, and the Dubuque Sand and Gravel Company. Additional cultural materials were collected from the surface and from the profile of the dredge cut. One deep pit feature was identified eroding out of the profile which contained ceramics, lithics, and floral/faunal remains. The recommendation for testing was made by the SHPO's representative (Dr. Brown), and this was agreed upon by all members present. A Cease Construction Notice was sent to the Dubuque Sand and Gravel Company on 4 November 1981 for the area where the site was located, pending completion of procedures under 36CFR800.

The presence of a potentially significant prehistoric site in the easement area resulted in a reevaluation of the conditions of the permit in accordance with Title 33 of the Code of Federal Regulations, part 325.7. This was necessary to reconsider public interest and to insure that the District remained in compliance with existing cultural resources regulations, particularly Section 110 of the National Historic Preservation Act of 1966 (as amended). The Cease Work Order was issued because the circumstances relating to the activity (dredging and channel cutting) had changed with the discovery of site 11Jd126.

As it is the responsibility of the District to conduct appropriate studies to provide the information necessary for an adequate review of the effects on cultural resources and for initiating the determination of eligibility (NRHP) process in this case, arrangements were made for archaeological testing of the site. This was accomplished by modifying GLARC's survey contract in November 1981. The scope and nature of the work were agreed upon as a result of discussions with Dr. Margaret Brown (SHPO's Staff Archaeologist), Mr. Robert Boszhardt (GLARC), Mr. Floyd Thompson (Dubuque Sand and Gravel Company), and the District. The resulting Scope of Work is contained in the GLARC testing report on file at the Office of the National Register.

The conclusion derived from testing was that site 11Jdl26 is a multicomponent, stratified, habitation site. Artifacts, features, and living surfaces were found representing Middle and Late Woodland occupations, as well as a possible pre-Middle Woodland occupation (early Middle Woodland or late Early Woodland).

Important information on lithic procurement and processing, subsistence activities, and floodplain adaptations within the Mississippi River Valley are present at the site. The results of the testing are fully described in the testing report (Boszhardt and Overstreet 1982) on file at the Office of the National Register. The results are also summarized on the National Register Nomination form (for DOE purposes only) included here as Appendix 3.

On 12 March 1982, this District requested the SHPO's opinion on the eligibility of 11Jdl26 (Appendix 4); the SHPO responded by letter of 16 March 1982 that the site is eligible. On 1 April 1982, the District requested a determination of eligibility from the Secretary of the Interior. By letter of 15 April 1982 and EO 11593 Notification Form the District was informed that site 11Jdl26 was eligible for listing in the National Register of Historic Places.

PREVIOUS INVESTIGATIONS

Our knowledge of the prehistory of the Pool 12 area in the Mississippi River Valley is severely limited because little in-depth, systematic, archaeological investigation of the floodplain has been conducted. The archaeological and geomorphological sample survey conducted by GLARC during 1981 was the first step in correcting this deficiency in northern Illinois. Previous investigations and research in the vicinity were sporadic in the past, and often focused on burial mound and habitation sites along the bluff line and in adjacent uplands. These are briefly summarized in the GLARC testing report for site 11Jd126 (Boszhardt and Overstreet 1981:11-17), including the burial mound explorations by Thomas (1881, 1884), Bennett (1945), Nickerson (n.d.), and Orr (n.d.).

Testing revealed that site 11Jd126 contains significant undisturbed features, artifacts, ecofacts, and geofacts which can add to our understanding of lithic procurement and processing, subsistence patterns, and cultural adaptations to the Mississippi River floodplain environment during the Woodland Period. In terms of both quality and quantity of data, this site is unique in the area and is the only confirmed (via testing) location for about a one hundred mile stretch of the river where substantial Middle and Late Woodland Period cultural remains might be recovered from stratified deposits. The potential for pre-Middle Woodland deposits also exists based upon the GLARC testing results.

The site contained shell midden (Boszhardt and Overstreet 1981:2) and still contains valuable information about the nature of prehistoric occupations in an area where the physical setting differs radically from pools upstream and downstream. The information is also in an occupational setting which differs radically from upland sites in the area. Site 11Jd126 is located in an area where existing models posit that remains of this magnitude are absent. The pit features (Boszhardt and Overstreet 1982:42-80) and midden (Boszhardt and Overstreet 1982:26) examined thus far contained evidence for flint knapping, nut and seed processing, and shell extraction and processing. Floral and faunal remains appear to be relatively well preserved (Boszhardt and Overstreet 1982:106) and will be useful for identifying subsistence patterns, resource availability through time, and seasonalities for the various occupations. Control of fire (pits) was documented (Boszhardt and Overstreet 1981:75), as was the use of pits for storage and refuse disposal (Boszhardt and Overstreet 1982:54, 64). While no identifiable house remains were found within the easement area, the density and diversity of remains would indicate that structural patterns might be present. The likelihood of this is increased because fiber-tempered daub was collected from the northern portion of the site about 100 meters northwest of the easement area (Boszhardt and Overstreet 1982:1,22).

Primary biface reduction and tool refinishing were also documented. Although only local lithic resources have been identified thus far, data recovery may reveal exotics. Controlled excavation under this plan should result in the recovery of lithics and ceramics from Late and Middle Woodland deposits, and hopefully from the pre-Middle Woodland deposit.

RESEARCH DESIGN

GENERAL DISCUSSION

In the past, the archaeology of the Pool 12 area was primarily predictive in nature, based upon limited comparisons to better known research areas in Illinois, northeastern Iowa, and southwestern Wisconsin. Thus, Pool 12 culture history was primarily defined by extrapolation from other areas, with little in the way of hard data from the pool itself. In the immediate vicinity of Pool 12, most recorded sites are well above the floodplain and many are located along the bluffs or within the uplands beyond. The existing models for the floodplain posit that this area was not generally suitable for habitation and that the settlement pattern is one of short-term extractive camps. The GLARC survey highlights the deficiencies in the previous models about prehistoric use of the landscape in this portion of the Mississippi River Valley.

The relative uniqueness of the Mississippi River floodplain landscape in Pool 12 and the uses of geomorphological information in documenting natural sedimentation and erosional processes, and how these affected prehistoric use of the floodplain led to the popular misconception that transitory, limited-activity, and extractive camps predominated the settlement pattern. This area was thought to be essentially devoid of large, intensively occupied and frequently reoccupied settlements with remains reflecting fully diversified activities.

Based upon the results of the GLARC investigation, it is clear that past concepts about occupation and utilization of the Mississippi River floodplain reflect sampling bias and that current models need to be reexamined. Site 11Jdl26 is an example of a locus where substantial Woodland period occupation occurred, where preservation is good, and where floodplain adaptations can be examined.

As the GLARC reports points out (Boszhardt and Overstreet 1981), "The model of transitory extraction camps or other functionally specific short term occupations is not supported by the diversity portrayed in the assemblages from most of the sites in Pool 12." Furthermore, the geomorphic contexts in which prehistoric sites occur raise a number of questions about settlement patterns, habitation site selection, resource procurement and processing, and inter-site and regional interaction. The relationships between floodplain sites and bluff crest and upland sites also must be explored. In the past, the kinds of floodplain sites represented by 11Jdl26 have been left out of model building and general cultural histories for the area because they tended to be buried and thus were rarely encountered.

RESEARCH PROBLEMS

There is a pattern of considering the area of Pool 12 as an extension of Illinois, eastern Iowa, or southwestern Wisconsin, depending upon the location of the researcher's institution or the predominant area of their expertise and experience. Site 11Jdl26 is at the center of this geographic area which since the exploration ventures of the 19th century has not been explored as a region in and of itself. Notable exceptions are the recent synthesis of Middle Woodland communities in southwestern Wisconsin (Stoltman 1979) and the GLARC survey.

Because of the location within the region and the known ceramics and other artifact content of the site, there is ample opportunity for a comparative study to place the site in a regional cultural context. Placing the site into a cultural-historical sequence will be largely confirmatory, because most ceramic wares and their relative temporal order are fairly well established. Havana, Hopewell, Weaver, Linn and Madison Wares, Lane Farm, Levensen, and Minotts types, and Canton Ware-like ceramics are all present at 11Jdl26.

The distribution of these ceramics in the site include stratified contexts. There is considerable information available from nearby areas to facilitate comparative ceramic studies. Such studies, focusing on attribute analyses or type-variety methods are instrumental in delineating a real stylistic zones which may, as an example for the Late Woodland Period, reflect ethnic diversity.

Ceramic variability may also elucidate the movement of Middle Woodland populations. For example, the record of the Havana tradition in the region should be closely reflected by the Middle Woodland ceramics at 11Jdl26 since the Mississippi River was literally a mainstream for interregional trade during the Hopewell Phase interaction sphere; though an intralocal transaction center interpretation may be more appropriate. Study of the paste and manufacture characteristics for the Middle Woodland Ceramics should reveal whether the ceramics were locally made or exotic, thus serving as one avenue for determining the role of this site in the trade network.

In addition to these investigations, the Middle-to-Late Woodland transition about which debate is becoming increasingly frequent, can also be addressed. The transition certainly involved substantial changes in the size of social groups, ideology, social organization, ceramic technology, lithic technology, and interregional influence.

For example, the origin of Maples Mills culture, centered geographically in central Illinois, is attributed to the actual movement of populations from the north (i.e. the Effigy Mounds Tradition, for which Madison Ware is a central concept). However, there are very close stylistic analogues to Canton Ware (Maples Mills culture) in Minotts ceramic types in southeastern Iowa. Also there are two or three examples of Canton Ware-like types in close association with Madison Ware types from sites excavated in the 1890's in western Jo Daviess County. These are important clues to the temporal and stylistic similarities and relationships between Madison Wares, Minotts types, and Canton Wares and antecedents of the latter. With the exception of Putneys' Landing (11He3) north of Burlington, Iowa (but in Illinois), for which the integrity of the Late Woodland component is in serious doubt given recent land use developments, 11Jdl26 presents the first opportunity in modern times to study this relationship in datable stratified context.

Also of considerable importance in the region is the subsistence information which 11Jd126 contains, and is inferred to contain, for the Middle and Late Woodland components. There is dearth of such information from northwestern Iowa, and that primarily for the Middle Woodland Period. No such information is available from floodplain contexts except in the Prairie du Chien area well to the north and Putneys' Landing (11He3) to the south.

Subsistence information in the form of macro-floral remains and faunal remains is known to exist at 11Jd126. While such remains are relatively sparse, they are anticipated to be concentrated in trash pits (e.g. Feature 1). Such remains are also known to be present in midden-like contexts in both components.

Subsistence information from both contexts will be of immediate use in describing the seasonal activities of Woodland groups on this locality. The results will also be of regional utility, particularly in the reevaluation of existing models of prehistoric utilization of the floodplain. The direct evidence of subsistence practices can be subjected to analytical techniques and used in conjunction with seasonality information to elucidate social organization of Woodland groups in broader perspectives to posit contrasting models keyed to major river, tributary, and upland settings. Application of the analytical results will be of qualitative utility given the preservation factors at the site.

The research problems described above by no means exhaust the potential of the significant data known or inferred to be present at 11Jd126. Investigators should not ignore recovery and analysis of lithic materials which very likely can serve as proxy evidence of subsistence practices. The latter can of course be pursued through analysis of chipped stone (particularly edge-wear analysis) and smoothed-stone assemblages and the production technology of these.

Research orientations of the ephemeral Pre-Middle Woodland component indicated by isolated lithics collected from the shoreline and from the stratigraphic position of Feature 5 are more difficult to define. As the nature and scope of Pre-Middle Woodland deposits has yet to be defined, questions will have to be broad and much of the effort will have to be confirmatory in nature. A primary goal here would be the accurate identification of the component, either stratigraphically (vertical and/or horizontal, i.e. mixed with Middle Woodland), and placement temporally. It will be important to know whether this component is late Early Woodland or early Middle Woodland. Research orientations will to a great degree be dependent upon the outcome of field investigations and problem development will have to be accomplished by the Principal Investigator in the field.

SUMMARY

The general objectives for data recovery within the easement are summarized below:

- a. Identification of cultural components.
- b. Stratigraphic position of each component in relation to the geomorphological setting (11Jd126 area and Pool 12).
- c. The relationships between the site, the environment, and surrounding natural resources and other Woodland Period sites in the vicinity.
- d. Type or types of activity and cultural affiliation represented by each component (for instance, is the component a midden or is it a village site, and what activities are inferred to have occurred) and differences between components.
- e. Recovery of significant cultural data in the forms of artifacts, soil samples, floral/faunal samples, C-14 data, notes, drawings, photographs, or other data to preserve as complete a record as possible of the area to be lost be dredging.
- f. Undertake at least 16% sample of the affected area as described under Recovery Methods: Excavation.
- g. Fully consider and address the research questions mentioned previously in the field as well as in the final report.

JUSTIFICATION

This Data Recovery Plan provides for the excavation within 104 square meters of surface area or 16.64% of the affected portion of the site. This translates to 56 cubic meters. This sample size surpasses the minimum recommended by the Illinois State Historic Preservation Officer and was selected to recover a sufficient amount of data at an acceptable cost to the applicant.

Approximately 12.5% of the site was destroyed by dredging; 12.5% will be affected by additional dredging scheduled for summer 1982. The remaining 75% of the site will be preserved.

If the data recovery and preservation plans are carried out, a determination of No Adverse Effect will be appropriate. Significant cultural data will be recovered from within the easement before dredging proceeds, and the undisturbed portion of the site outside the easement will be preserved for future investigation.

RECOVERY METHODS

Introduction

The Data Recovery Plan will be designed to collect significant information applicable to the preceeding research questions from the 625-square-meter portion of the site to be affected by dredging. This will be done in accordance with 36CFRR66 and the Advisory Council's handbook entitled The Treatment of Archaeological Properties, Part 3.

This Data Recovery Plan addresses itself to the problems of the overall site area, the portion to be affected by further dredging (12.5%), and the complexity of the multicomponent nature of the deposits. Intertwined with these concerns is the need to adequately address the geomorphological setting and sedimentation processes which are responsible for the geomorphic and cultural stratigraphy at the site. Thus, data recovery will have two major foci: 1) analysis of cultural remains, and 2) interpretation of local sediment geomorphology. The latter has bearing on the Mississippi River hydrological system generally, and data would be applicable on pool and site (archaeological) bases. The conditions of sites and implications for preservation (particularly Early Woodland) by burial, could also be addressed at 11Jd126. The point specific data about sedimentary process at this site is applicable to any site in the pool where similar processes occur. The results of geomorphological analyses will have broader application for identification, interpretation, and management of cultural resources within the Mississippi River Valley on lands under District jurisdiction.

Geomorphology

Investigation will be made of the geomorphic processes and the relationships between levels of origin for features and natural geomorphological/sediment processes. The sedimentary history of the natural levee upon which the site is located will be defined to correlate natural sedimentation events to cultural events. Three bulk soil columns (approximately 25 cm²) will be taken to preserve and document cultural and geomorphological data from within the easement for later analysis in the lab. The intent of the soil monoliths is for collecting detailed soils data for analytical procedures not possible in the field.

The above will be supplemented by cut bank (dredge and Mississippi River) sediment mapping and a series of soil cores (1-2" dia.) across the site at close intervals (within the easement). It is anticipated that a fourth soil column will be required outside the easement in the western portion of the site to determine upper soil horizons. This is because as much as a foot of earth may have been removed and/or disturbed during clearing and grubbing in the easement area.

The geomorphological data can then be utilized for answering questions about seasonality of occupation as well as natural disturbances to cultural deposits at 11Jd126 which may be applicable to other sites in the pool. For example, it may be possible to ascertain degrees of erosion and sedimentation between cultural periods; the same processes may also define seasonal occupations

within cultural periods. The analysis will also be directed toward elucidating problems identified during the Pool 12 survey (Boszhardt and Overstreet 1981: 126-132) about the natural development of the floodplain and the use of it by prehistoric cultures.

Excavation

This element will begin with a controlled surface collection utilizing the metric grid established by the GLARC during the testing phase. Once the surface collection has been completed, the disturbed surface will be examined and this material will be removed either by shovel or machine to expose undisturbed surfaces. After mapping, if appropriate, three 3-meter-square block excavations will be selected for hand excavation. These will be intended primarily for investigating the Late Woodland component. The locations of these blocks will be left up to the contractor; however, it is anticipated that discussions with the SHPO and District Archaeologist will occur.

It is anticipated that Late Woodland features will be sparse, and that this component will likely consist of a midden (occupation surface) with poorly defined activity areas. Bearing this in mind, excavation will proceed by trowel and shovel, making use of 1/4-inch mesh screening for fill and the collection of soil samples for identifiable depositional layers. Arbitrary levels will be acceptable if depositional layers are not delineated or if depositional layers are deep. Features will be mapped in planview, then bisected. Half of the feature will be excavated quickly, collecting only easily retrievable artifacts. Once the vertical profiles have been drawn, and recorded, the remainder of the feature will be removed in depositional layers, if possible, the fill being bagged for later in-house detailed analyses such as flotation, C-14, floral/faunal, and microscopic. All mapping within the block excavations will take geomorphological considerations into account as well as cultural ones. Finally, it is anticipated that the placement of block excavations will be a field decision of the Principal Investigator, based upon previous work at the site and the results of the surface collection and geomorphological data from soil columns and small soil cores. The latter should provide information about the content of the Late Woodland component to improve locational decisions for the blocks and to take the decisions beyond the realm of unnecessary prediction.

The same basic methodology will also apply to a 25 meter by 2 meter trench along the dredge cut to recover data imminently endangered by erosion and slumping. This will allow for the use of an existing east profile from the surface to a point below the cultural deposits. Plainview and vertical mapping/ recording will be required. This will also focus on both cultural and geomorphological information. The trench may have to be segmented to account for an irregular shoreline created by erosion.

The Middle Woodland component will be approached in a slightly different manner. Excavations will continue in the same three block excavations described above using the same procedures; however, three additional 3-meter-square blocks will be excavated. In the latter blocks, the Late Woodland component will be quickly removed by shovel, collecting only easily retrievable artifacts until the Middle Woodland component is encountered. Soil samples will be taken from the Late Woodland component, and profiles will be recorded. If features are encountered, they will be bisected and removed as described above. The same careful excavations procedures described for the Late Woodland component (original 3 blocks) will then be applied to the Middle Woodland Component in all six block excavations.

The ephemeral nature of the possible pre-Middle Woodland component will require maximum flexibility in excavation strategy and the decisions about the best approach to pre-Middle Woodland deposits will be left to the contractor. The only recommendations applicable here are that two levels of consideration will be required. There is the possibility that pre-Middle Woodland and Middle Woodland deposits are mixed and stratified horizontally, and there is also a possibility that geomorphological/sedimentary stratification will be encountered. Hence, the methodology will have to be designed to allow for the interpretation for vertically stratified deposits as well. The sedimentary and erosional history of the natural levee will be applicable here. Furthermore, it is hoped that the information derived from soil monoliths and cores will be useful in identifying the locations, nature, and depths of any pre-Middle Woodland deposits. It may be that the same six block excavations (or a 50% sample thereof) can be used; if not, it is recommended that additional blocks be opened, removing superimposed components by shovel or heavy equipment. More detailed recording in these cases may be required, but this decision will be the responsibility of the Principal Investigator.

GENERAL SPECIFICATIONS

RESPONSIBILITY

In consultation with the SHPO and this District, Mr. Floyd Thompson, President of the Dubuque Sand and Gravel Company, PO Box 325, Dubuque, Iowa, shall arrange to undertake data recovery in a manner to insure the greatest contribution to an understanding of the prehistory of the region and the site. Performance of data recovery shall be made by qualified personnel (SOPA and/or 36 CFR 64, Appendix B, and 36 CFR 66, Appendix C in close cooperation with the SHPO and the District Archaeologist.

FINAL REPORTS

The Principal Investigator shall be responsible for preparing a comprehensive technical and interpretive report on the investigation. Basic data description, including provenience and metrics, UTM coordinates for the site, and photographs and drawings will be provided in the draft and final reports for use both in support of the author's arguments and conclusions and as a source of basic information that may find wider use by other archaeologists. The Principal Investigator shall formulate an interpretive/predictive discussion for the remainder of the site outside of the easement which will be preserved. This will be based upon the data recovered from 11Jdl26 (survey, testing, and data recovery) as well as comparative data from Mississippi River Pool 12 and the region. The survey and testing reports (draft form) by GLARC will be made available for inspection and use at the Clock Tower Building, US Army Engineers. Six draft copies of the Comprehensive Report will be submitted to the SHPO for review 30 calendar days after completion of field work. The final report will be due 45 calendar days after receipt of the SHPO's comments on the draft report; the Contractor shall furnish 50 copies of the final document to the Dubuque Sand and Gravel Company who will provide 5 copies to the SHPO and 25 copies to the District. This District will distribute copies to the appropriate Federal agencies.

Prior to acceptance of the final report by the SHPO and the District, neither the Archaeological Contractor nor his representatives shall release any information or material of any nature obtained or prepared under the contract without prior approval of the same. After acceptance of the final report, its reproduction and use shall not be restricted by either party. The exact site location will not be included in reports released to the public.

CURATION

Any artifacts or cultural material collected and any notes, photographs, and data generated during the performance of contract services shall be curated with the Principal Investigator for preservation upon completion of the contract, but at the discretion of the SHPO and Rock Island District. All artifacts, notes, photographs, samples, and other data generated as a result of contract services will remain the property of the US Government, and shall be made available upon request by the District Cultural Resource Designee, Rock Island District, for interpretative programs or additional research purposes.

General Specifications (Cont'd)

All data generated by this contract shall be curated in one place. It is the Contractor's responsibility to safeguard all of this material and to provide an inventory and catalogue system to facilitate access.

In order to attain maximum cost effectiveness without jeopardizing the significant informational content of the archaeological site, the Contractor shall, wherever possible, make appropriate use of power machinery for test trenching, probing, test pitting, and removal of plowzone, sterile overburden, and natural strata overlaid of cultural material. Power equipment, as referred to in this instance, refers to a backhoe, a small bulldozer, and a power auger to be provided by Mr. Floyd Thompson of the Dubuque Sand and Gravel Company.

APPENDIX J
REVIEW CORRESPONDENCE



DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING
ROCK ISLAND, ILLINOIS 61201

REPLY TO
ATTENTION OF:

May 17, 1983

Planning Division
Environmental Analysis Branch

Dr. David F. Overstreet
Great Lakes Archaeological
Research Center
P.O. Box 1304
Waukesha, Wisconsin 53186

Dear Dr. Overstreet:

We have completed our review of the report entitled Intensive Survey at 11-Jd-126, Jo Daviess County, Illinois, that you prepared for us under contract DACW25-81-C-0045. Enclosed are our comments, as well as comments from the Illinois State Historic Preservation Officer. Please take these comments into consideration prior to producing the final reports. Also enclosed is a letter from Interagency Archaeological Services; note that their current workload precluded review of your report.

The report fully meets the requirements set forth in the Scope of Work and, in some areas, we recognize that you have voluntarily exceeded your contractual requirements in the interest of professionalism. The fact that you maintained a high level of effort under adverse weather and ground cover conditions is greatly appreciated.

Overall, the report provides both descriptive and interpretive information which will be of general use to both this District and other professional archaeologists working in the Midwest. The results of your work at 11-Jd-126 will be of use for our planning activities (site locations and types) and for researchers interested in refining concepts of flood plain utilization.

-2-

You are instructed to proceed with the final reports (25) as stipulated in the Scope of Work. Do not forget to include the public information summary with your final bill. If you have any questions, please call Mr. Charles Smith at 309/788-6361, Ext. 6349.

Sincerely,


for Arthur J. Klingerman
Chief, Planning Division

Enclosures

Sheet 1 of 3

ROCK ISLAND DISTRICT

Branch/Office NCRPD-E Reviewer C. Smith Ext. No. 6349Subject: Intensive Survey at 11-Jd-126,
Jo Daviess County, Illinois Date 5-6-83

CMT. NO.	Dwg. or Para. No.	COMMENT
1	p. 1 ✓	Determinations of eligibility and effect were requested for the site as a whole, not just the portion within the barge facility easement. A No Adverse Effect determination was derived by preserving 90 percent of the site and by developing a data recovery plan for the small portion to be affected by channel cutting.
2	p. 5 ✓	Indicate references for this figure.
3	p. 2 ✓	Point 8 (to be added) might discuss the incongruency between the data found in the flood plain and existing models for Woodland occupations in the region.
4	p. 16 ✓	Other management concerns are the depths of deposits, problems with erosion, and quality of preservation.
5	p. 9, 31 ✓	Provide the rationale for placement of excavation units.
6	p. 45 ✓	Could the stone cairns be temporary storage pits to keep furs and meats from scavengers during processing?

AD-A131 518

INTENSIVE SURVEY AT 11-JD-126 JO DAVIESS COUNTY

3/3

ILLINOIS VOLUME 1(U) GREAT LAKES ARCHAEOLOGICAL

RESEARCH CENTER INC WAUKESHA WI D F OVERSTREET JUL 83

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DACH25-81-C-0045

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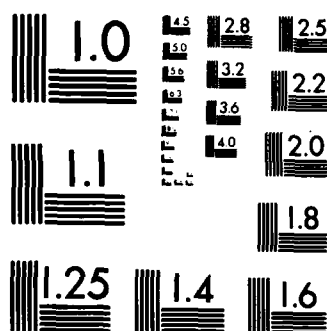


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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Sheet 2 of 3

ROCK ISLAND DISTRICT

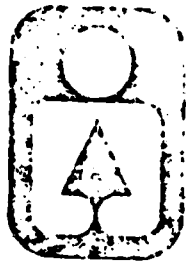
Branch/Office NCRPD-E Reviewer C. Smith Ext. No. 6349

Subject: Intensive Survey at 11-Jd-126,
Jo Daviess County, Illinois Date 5-6-83

CMT. NO.	Dwg. or Para. No.	COMMENT
7	p. 51 ✓	Was the daub applied to portions of posts (underground) as waterproofing?
8	p. 52 ✓	Might the compacted silt area represent an entranceway?
	p. 95	Consider the kinds/quantities of ceramics, the range of lithic items in terms of processing, the integration of multi-state derived Woodland characteristics reflected by material remains, and the site location which is within a mile or so of several microenvironments (river, flood plain, terraces, bluff crest, uplands, etc.). What could be said about Woodland Period settlement preferences, flood plain activities, compatibility with existing models, resource procurement, and/or relationships with other Woodland culture areas.
10	✓	Your discussion of construction details for the historic structure is good; this will be useful for comparative study.
11	p. 82-91 ✓	Your treatment of historic materials is appropriate in light of the small sample size. The diameters of the kaolin pipe stems might be

p. 64?

Illinois



Department of Conservation

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LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62706

CHICAGO OFFICE - ROOM 100, 160 NO. LASALLE 50601

David Kenney, Director • James C. Helfrich, Assistant Director

April 11, 1983

Mr. Arthur J. Klingerman
Chief, Planning Division
Department of the Army
Rock Island District, Corps of Engineers
Clock Tower Building
Rock Island, Illinois 61201

Dear Mr. Klingerman:

The report "Intensive Survey at 11 Jd 126, Jo Daviess County, Illinois" has been reviewed by the Department of Conservation Staff Archaeologist. The report has adequately met the requirements of the scope of work. The data which has been obtained from the work further supports the significance of the site. The site has the potential to provide information on a number of prehistoric components and an early historic one. The report is technically adequate and a good addition to our knowledge of the archaeology of the area.

Sincerely,

David Kenney
State Historic Preservation
Officer

DK/MKB/bk



United States Department of the Interior

NATIONAL PARK SERVICE

ROCKY MOUNTAIN REGIONAL OFFICE

655 Parfet Street

P.O. Box 25287

Denver, Colorado 80225

IN REPLY REFER TO:

H2415 (RMR-PR)

APR 12 1983

Mr. Arthur J. Klingerman
Chief, Planning Division
ATT: Mr. Charles Smith
Department of the Army
Rock Island District, Corps of Engineers
Clock Tower Building
Rock Island, IL 61201

Dear Mr. Klingerman:

We are returning the the two-volume draft report entitled, "Intensive Survey at 11-Jd-126, Jo Daviess County, Illinois."

Regretfully, our current workload prevents a timely review of this report as requested by your letter of April 6, 1983.

Sincerely,

Jack R Rudy, Chief
Branch of Interagency Archeological Services

Enclosure

END

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